# Michigan Atari Magazine

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Vol. 3 No. 5
May 1988

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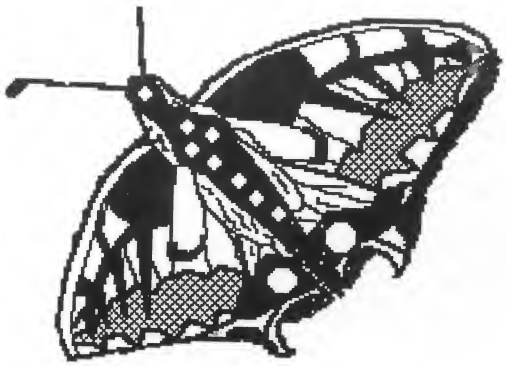

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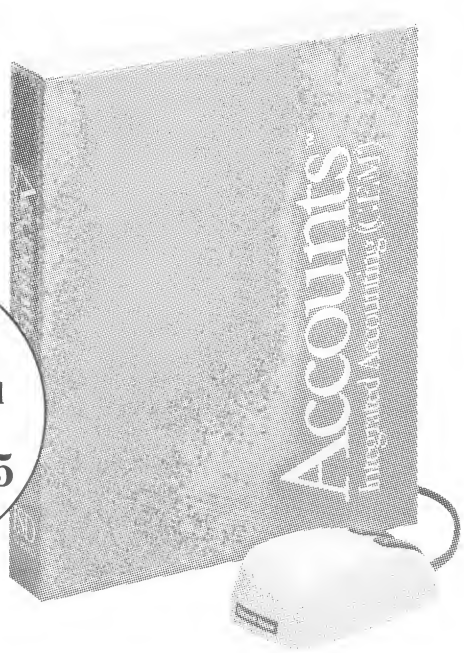


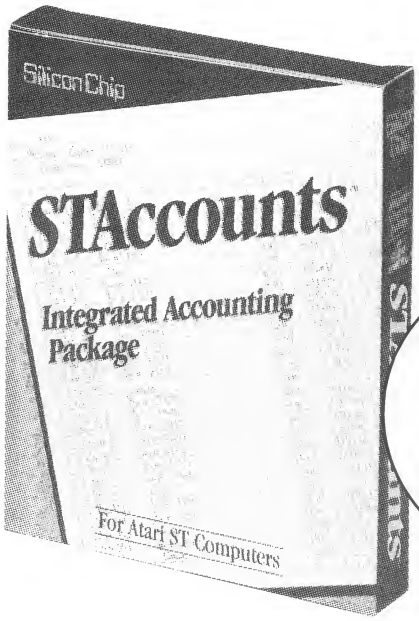


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## What We Are

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## It's Not Our Fault



# MAM this Month

Vol. 3 No. 5
May 1988

## Features



## Club News and Minutes



## Advertisers



**Special Thanks** to Steve Volker of TAG for this month's cover art. Steve's company, **Graphicom Enterprises**, located in Saginaw, MI, will create computer graphics to fill your every need. And they do it on Atari STs! Call (517)793-2955 for more info. Look for more of Steve's excellent artwork in future issues of MAM.

# From the Reader's Viewpoint

## WAUG - A Growing Club???

I joined WAUG last year, at the first (Sept.) meeting of the year, right after the MAGIC show. There was a lot of interest that night, but only 10 or 15 members in attendance. I could see the officers of this club had a lot of potential: i.e. putting out their own newsletter in protest to disagreements with MAM, and having a speaker from a mail-order house. Not having a complete computer to do demos was a small disappointment. All this was going on in a public library basement.

Compared to what it once was, WAUG has come a long way: A club with 30 to 35 people at each meeting (70 members total) in a college classroom, a 20" monitor for demos and members willing to show their interests. Members are a little shy to ask questions, but it's still a big accomplishment by the officers, making this club a good source of information for Atari owners.

I feel that after the elections in June, the officers should be awarded with a dinner at Cottage Inn, paid by the members, and only for the officers. Thank you, WAUG officers.

But, and there is always a but, I also think WAUG could do more for the members or, to phase it better, the members can do more for the club to make the meetings more interesting.

What can you do for your club? Later in this article I will list some of the ideas I've devised to help WAUG. For example, I've volunteered my time and energy to be Magazine Librarian, besides bringing in my personal stockpile of old and new (preowned) 8bit software for sale. I hope someone carries on the magazine librarian's job when I step down to run for the 8bit librarian. I know there are members (not officers) willing to offer their time and services to the club, so why don't you?

I've compiled a list of ideas I have for our club, which could be adapted to any other club. This is not a complete list; you may have more or better ideas, but it will be a start, and something for us to discuss at upcoming meetings.

1. The club could use a people to hold 8bit or ST SIG meetings once a month at their home and give a report at the main club meeting.

2. More WAUG members should attend meetings, not just 30 percent but 100 percent! If every member attended and brought one person to join this year, we could be as big as MACE (maybe :>). WAUG is still growing and moving -- out of the small classroom into a computer store showroom. (See WAUG club minutes for details.)

3. Members should offer to demo new/old software/hardware and offer to bring in their hardware for the meeting. The club's equipment may not always be available every meeting. The ST used each month is brought in by a couple of members (Bill&Pattie), so if they leave or are unable to attend a meeting, we have no ST to show demos on. Plus, having more than one machine to show demos during and after the club's business reports would be a great benefit.

4. WAUG needs members to submit their favorite collection of public domain software to both the libraries for addition to the mass amount of software we already have now -- you can never have too much.

5. Someone could be in charge of running a *free* drawing at the club's meetings for an 8bit and ST disk to drum up interest in the software libraries, which is a club's bread and butter. If there is no interest in the club's software library then there will be no interest in the club. Members will go somewhere else and spend their money on someone else's library.

6. Articles for MAM are needed. I can't stress this point enough. Atari Corp. is not going to promote your favorite software/hardware or application technique, so you have to. If it is left to the editors of MAM to find/search for interesting articles for each issue, they will sooner or later stop for lack of interest. So, it is up to you to help keep Atari and MAM alive and well.

7. We need a volunteer for a remote users' secretary. We receive letters each month from Atarians all over asking about our club. We need someone to write to these people and mail them a listing of our disk libraries. If you are interested, why not come to one of the officers' meetings? You're always welcome; it's your club too. Doug, Craig and I have several letters that need to be addressed.

In closing, I'd like to remind you that Rick has volunteered his services and studio for MIDI SIG meetings, so contact him if you're interested and I hope to hear a SIG report at the next meeting. Also let's show some interest in the MIDI SIG. Who knows, we may be able to come up with a WAUG song/record good enough to hit the TOP 10!

Thank You, and Happy ATARIN'.
Michael Ranger

# Atari News and Comment

News Anaylsis by John Nagy & Bill Rayl

## Will Piracy Kill the ST?

WordPerfect, the biggest and long-awaited word processor many thought would finally bring respectability to the ST line almost got pulled off the market's shelves due to pirate BBSes...depending on who you believe. Several western BBSes were found offering the multi-disk $300+ commercial software package to anyone who called...and officials for WordPerfect had an understandable fit. In a phone call with representatives from the Atari ST SIG on CompuServe, the Word was Perfectly awful. The company consided pulling the word-processor out of the market, and vowed to have no further product or support for any Atari product.

An online conference was arranged, and by the time everyone got together, WordPerfect softened its position considerably. Many callers pointed out the software was almost useless without a complete manual, and it was so large almost noone had even bothered to download it from the pirate BBSes. In the end, WordPerfect said the product would stay on the market, although sales were slow. Further Atari software would certainly be "considered," but "much more market research would be done before any other projects" were undertaken.

Throughout the entire conference, and in messages and articles about the WordPerfect situation, was a strange and troubling apologistic attitude. Piracy was all but directly defended on terms such as lack of dealers, long delays between development and release, overpriced software, and "harmless limited distribution." Many in the conference and message areas spoke with obvious familiarity with the pirate BBSes in question. Some callers went so far as to suggest that the entire "pull-out" was either a publicity stunt to get the WordPerfect program talked about. Others hinted it was perhaps being done to ditch a troublesome product without taking responsibility for debugging and supporting it.

*WAKE UP!* Piracy will *always* be a *major* concern of software developers. When you have a machine that has a limited user base to begin with, a low-dollar user reputation to worsen the matter, you simply can't add "rampant" and rationalized piracy to the negatives. You simply provide a developer with all he needs to choose a more lucrative and appreciative audience. Meanwhile, many swipes have been taken at those who have attempted to stem the piracy tide. MichTron and the Software Publishers Association (SPA) have offered bounties for informers on pirate BBSes. This is called vigilante action by some, but these programs have not turned remarkable results, mostly because they require a verifiable phone number, password, SysOp's name, and address of the BBS. How many non-pirate BBSes have that much public information available? Come on, why can't the police and phone agencies get involved once a user with a verifiable password gets demonstrable pirate material?

As long as we wink at or turn the other cheek to piracy it will eat away at the only thing we can't do without -- developer support (of old software and good new software). Don't make excuses for yourself or others... Don't pass pirate software. Don't tolerate pirate BBSes.

Speaking of open piracy, how can it be that Atari people have such a bad reputation, yet every Computer Swap and Sale has at *least* one and often *several* booths of Commodore and IBM disk copiers in action. The "Any Program in this Bin -- $5 -- No Documentation" signs are truly amazing. I have never seen Atari programs hawked so openly... Could it actually be *only* because the market is too small? I prefer to think it is due to an overall more mature user base for the Atari machines. We must simply be aware it will also take fewer "bad apples" to spoil our smaller barrel!

## On the ST Horizon

One of the hot new ST products that just hit the market is Turbo ST. a software substitute for the Blitter chip. With Turbo ST and the Unversal File Selector, Atari may be finding an easy way out of upgrading their ROMs! [Ed: See the Turbo ST review elsewhere in this issue]

Soon to be released by a company called MegaByte is a hardware modification that claims to give the ST a 16 mHz speedup. The process of "upgrading" involves yanking the 68000 chip (not for the weak of heart), installing MegaByte's hardware and putting the chip back in. To be sold at around $200, this product is reputed to speed up PC-Ditto to full IBM speeds! That may be one of it's biggest attractions. Currently, rumor has it the release of this product has been slowed because MegaByte is adding a place for current ST owners to pop in a Blitter chip. Another case of a third party making

Atari's life easier...if MegaByte adds Blitter support, Atari won't have to come out with its long-promised Blitter upgrade for current owners. And even before we could say, "What will they think of next?" MegaByte has announced "other products" allowing future expansion of the ST. What these products are have not been announced, but Atari was reportedly interested enough to give MegaByte a call to see what's up.

### Bad News from Compute!

Readers of the May issue of Compute! magazine may have noticed the lack of 8bit Atari support...Bill Wilkinson's article was gone, type-in programs were gone and most telling, the list of computers supported by Compute! did not mention the 8bit Atari line at all! A reliable source inside Compute! has confirmed that they have indeed dropped the 8bit line and that Compute's ST will soon follow into oblivion. Compute! states that lack of ST computer sales makes publishing the separate magazine unprofitable. The ST will continue to be supported in the main magazine, but Compute's ST's days are numbered.



## Give a Turbo Boost to Your ST

Review by Byron Johnson (GLASS)

An amazing new piece of software has surfaced: Turbo-ST by Softrek. Just when you thought the ST wasn't being supported anymore, someone has to prove you wrong. The Softrek people have put together an improvement on a portion of the GEM operating system.

This program is 25K long, and replaces the "Bios function 3 and Gemdos function 9" routines with pure undiluted assembly language code. This speeds up the text display for page scroll up/down and line scroll up/down in any program using GEM. Results will vary depending on how often the program makes these calls and how much text is used within the program. But, generally speaking, Turbo-ST will show a definite increase in text updating speed to the screen. After using it, you won't be able to get along without it. Even the desktop comes up and scrolls faster. The program lists for 50 dollars, but sells for 41 dollars. It is not copy protected, and, as a desktop accessory, can be turned easily on or off.

By adjusting the "key repeat rate" on the control panel, you can change the line scroll rate to suit your needs. I've noticed a considerably increased speed while running Word Writer ST. But, First Cadd wouldn't even load with Turbo-ST installed -- my 520ST just locked up tight and I had to reboot.

Turbo-ST does what the blitter chip is supposed to do, with text only, and does it much faster -- plus it's available right now. Who knows when or if the blitter upgrade will ever be available for the ST. The author, Wayne Buckholdt, intends on supporting and making improvements to this program. He plans to upgrade all registered owners of Turbo-ST for only ten dollars.

So far, only Word Perfect, First Cadd, Fselect (PD) and Gulam (PD) will not work with Turbo-ST. Is this program worth buying? Only you can say for sure. I would rate its usefullness at 6.5 on a scale of 1 to 10. If you use a lot of text-oriented software, then it's worth having.

This program reminds me of another program, the Universal File Selector. It also replaces a portion of GEM and does it much better. I think I'm beginning to see a trend here. Wonder what's next?

Turbo-ST v1.0 by Softrek, written by Wayne Buckholdt P.O.Box 5257, Winter Park, Fla 32793 (305-657-4611)

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# Building an ST Trackball

By Don Neff (MACE)

## The Project

The Trackball, an old familiar peripheral in the Atari 8bit world, has suddenly been discovered by ST and IBM users. Trackballs are generally considered superior to their small cousin, the mouse, for CAD or fast games. First, the larger size of a trackball seems to permit finer control of the cursor during the delicate moves often encountered in CAD. Second, the stationary trackball can be used with wild abandon during a fast game, without worry of running out of room on the desktop (how many times have you slammed your mouse into the side of your computer at a crucial moment?).

While the IBM world seems to be filled with suppliers of trackballs, ST users must create their own. Most ST users create theirs by modifying an 8bit trackball such as the WICO Command Control or the Atari CX22 Trackball. This article gives you the information needed to convert either of these to ST mouse compatibility. The Atari CX22 conversion is easier to do than the WICO conversion. There are major differences in the two, so the modification process is covered here in several sections. The first sections cover things common to both the WICO and Atari trackballs. The next sections address the items which are specific to each one of them. These modification sections are followed by brief testing and trouble shooting sections.

The WICO conversion eliminates any possibility of using the WICO on an 8bit machine again. The Atari conversion, however, retains the original 8bit compatibility while adding ST Mouse compatibility.

## Caveat

Both of the conversions seem deceptively simple because you will be either installing a single IC chip or adding a few new wires. However, every component or connection is critical and any error will result in a useless trackball (but no damage to your ST). Read and understand this entire article before modifying your trackball. If you have doubts about your understanding of any part of this article, get help before starting. The troubleshooting sections at the end of the article address only the most obvious problems. Be aware that the wire colors described from my trackballs may not match what you find in yours. Or, even worse, the colors match, but the wires are connected differently.

I am available at the WAUG and MACE meetings (or you can write to me through Michigan Atari Magazine) if you have questions. I do not have time to convert a trackball for you; you must do it yourself.

## Buying the Trackball

The Atari CX22 Trackball is still available from some stores who sell Atari 2600/5200 game systems. I bought mine for $10 from the Kay Bee Hobby and Toy store at 12 Oaks shopping mall in Novi, Michigan. They still have dozens more they would like to part with.

Both the WICO and the Atari trackballs are frequently available (new and used) at Computer/Ham Radio flea markets. These flea markets are also a good source of other Atari parts, peripherals, books and software. (I am always amazed at the number of Apple, Commodore and IBM pirates openly selling pirated software complete with photo-copied documents at these events and wonder why Atarians are blamed for all piracy!)

## Preparing the Trackball

Cut the cable off near the case and discard it. Turn the case upside down and remove the Phillips head screws which fasten the top and bottom pieces together. Hold the top and bottom pieces together with your fingers and turn the case right side up again. Gently ease the top of the case off the bottom piece. The Atari trackball case will require serious prying during the first 1/4 inch of separation.

Remove the cue ball, the two roller axles, the single bearing, all springs (if present) and put them in a safe place.

## Preparing the New Cable

The new cable is made from a Radio Shack joystick extension cable (RS# 270-1705). Cut the male end (the DB9 plug with pins instead of holes) off of the new cable and throw it away. Trim the outer insulation back about six inches on the cut end of the cable to expose the nine individual wires inside. Strip and tin about 1/4 inch of the ends of the nine wires. Use your ohmmeter to identify which wire connects to each pin in the female DB9 plug on the cable. Label each wire with a small numbered tag (a friendly electrician can get wire labels for you) indicating the appropriate pin number for easy identification in later assembly steps. The wire from pin #5 can be cut short since we will not be using it at all. Form a strain relief at the cut end of the cable by applying a ring of epoxy around it. Atari CX22 owners should now skip to the section titled "Atari CX22 Conversion." WICO owners should continue on with the next section.

## Building the WICO Circuit

Remove and discard the main circuit board from the WICO case, leaving the two LED opto-interrupter mounting boards in place in the case. The circuit described here will replace the original which you have discarded.

Figure 1 shows only one fourth of the necessary conversion circuit. The other three fourths are sim-

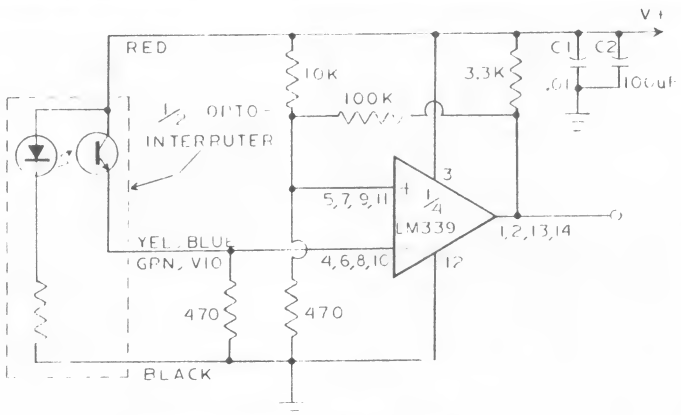



Figure 1: WICO Curcuit

ilar to this, but use different pins on IC1. If you don't know how to expand Figure 1 into the full circuit, get help. This step is the one most likely to cause serious problems (and frustration) for you.

IC1, an LM339 (RS# 276-1712), is four LM311 comparators in a single case, all sharing common power pins (#3 and 12). We will be using one comparator each, for left, right, up and down signals. Figure 2 shows the pin relationships for the inputs and outputs as we will be using them.

Build the circuit on a small circuit board (RS# 276-148) using a socket (RS# 276-1998) for IC1 (RS# 276-1712). C2 (RS# 272-1028) may be located any place in the case, but C1 (RS# 272-131) should be as close to IC1 as possible. The resistors (RS# 271-1317, 271-1328, 271-1335, 271-1347) may be mounted in any convenient location on the circuit board.

After the circuit is built, connect the wire from pin #1 of the DB9 plug on the new cable to pin #1 of IC1. Connect the wire from pin #2 of the cable to pin #2 of IC1. Connect the wire from pin #3 of the cable to pin #13 of IC1. Connect the wire from pin #4 of the cable to pin #14 of IC1. Those are the up, down, left, and right signal paths to the mouse port.

Connect the wire from pin #7 of the DB9 plug on the new cable to pin #3 (V+) of IC1. Connect the wire from pin #8 of the new cable to pin #12 (ground) of IC1. These are the V+ and ground points for other parts of the circuit too, so leave room to connect other wires at these points.

## WICO Triggers

The WICO has only one trigger button, SW1, so you must add the second one, SW2 (RS# 275-1566). Select a convenient spot on the top of the case where the new switch will not interfere with anything inside the case. Drill a 3/8 inch hole in the chosen spot. Insert switch SW2 in the hole and fasten it in place with the supplied retaining nut. Connect one terminal of SW2 to any ground connection and connect the other terminal to the wire going to pin #9 of the DB9 plug on the new cable.

Cut the 11-connection plug off of the wires from the two LED opto-interrupter circuit boards which remain in the case. Two of the wires (white in mine) from this plug are for the original trigger switch, SW1. Connect one of these white wires to any ground point, and connect the other to the wire from pin #6 of the new cable. Figure 3 shows how the trigger button connections relate to the DB9 plug.

Each of the two LED opto-interrupter mounting boards has four wires coming from it. Two of these wires (red and black in mine) are the power feeds for the LEDs. Connect the two red wires to the V+ source (pin # 7 of the new cable) and connect the two black wires to ground (pin #8 of the new cable).

The remaining four wires (yellow, blue, violet, and green in mine) carry the trigger signals to the four comparators. Connect the yellow wire to pin #6 of IC1. Connect the green wire to pin #4 of IC1. Connect the blue wire to pin #10 of IC1. Connect the violet wire to pin #8 of IC1. Figure 2 shows the color and pin number relationship.

Before you place IC1 in its socket, plug the WICO trackball into your mouse port and turn the ST on. Use a voltmeter to insure you have +5 volts at pin #3 and ground at pin #12 of the IC socket.

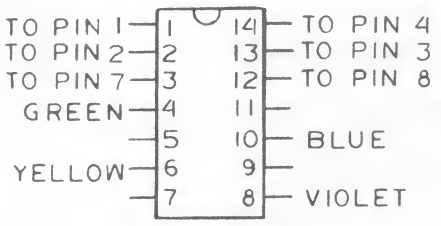



FIgure 2: IC1

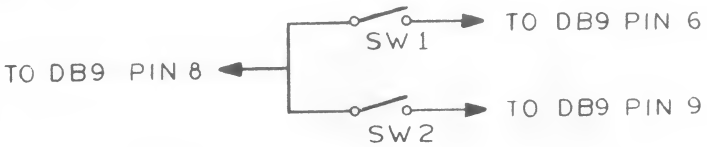



Figure 3: Trigger Buttons

Next, check both of the opto-interrupter boards to insure you have +5 volts on their red wires and ground on their black wires. Unplug the WICO trackball from the ST and insert IC1 into its socket. Refer now to the section about testing your modified trackball.

## Atari CX22 Conversion

Leave the original circuit board in the case; it already contains the circuit which WICO owners must build. We will be adding a new computer cable, one switch, and connecting several new wires to the original board. Remove the remaining short piece of black insulation from the stub of the original connector cable and separate the individual wires. Strip and tin about 1/4 inch of the free end of each wire. Six of these wires are attached to J1, the circuit board connector strip located in the rear left corner of the circuit board. Four of the six wires from J1 will be soldered to the new switch as shown in Figure 4. Connect the black wire from pin 1 (ground) of J1 to the wire from pin 8 of the DB9 plug on the new cable. Connect the orange wire from pin 2 (V+) of J1 to the wire from pin 7 of the DB9 plug on the new cable.

The new switch is a four pole, double throw (4PDT) which is available from most Ham Radio or electronics stores (but not Radio Shack). These switches are often available for less than a dollar at the Computer/Ham Radio flea markets mentioned earlier. Locate a convenient place for the switch and drill a mounting hole in the case for it.

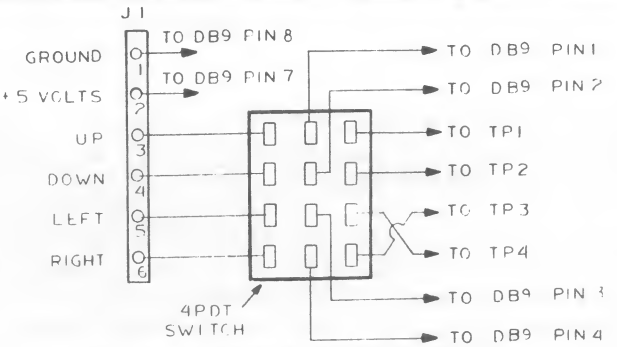



Figure 4: Atari Switch

Figure 4 shows the wiring scheme of this switch which allows you to change from 8-bit to ST compatibility. The ST signals are picked up at the four points labeled TP1-4 in the front left corner of the circuit board. TP1 and TP2 are the left/right connections; TP3 and TP4 are the up/down connections. Solder a 9-inch piece of wire to each of these 4 points. Connect the wires from pins 3-6 of J1, the wires from pins 1-4 of the DB9 plug, and wires from TP1-4 to the 4PDT switch as shown in Figure 4. Now mount the switch in the hole you drilled earlier, and fasten it in place with the mounting nut.

## Atari Trigger Buttons

The Atari trackball already has two trigger buttons installed, but they are connected together with two wires. One wire (black in mine) is connected to ground through pin #1 of J1 and should not be cut. The other wire (red in mine) should be cut near the terminal on the left trigger button.

Notice there are two red wires at this terminal; cut only the one from the right trigger button. Connect the red wire from the right button to the wire from pin #9 of the DB9 plug on the new cable. Connect the red wire you left attached to the left trigger button, to the wire from pin #6 of the new cable. Figure 3 shows how the trigger button connections relate to the DB9 plug.

Plug the Atari trackball into your mouse port and turn the ST on. Use a voltmeter to insure you have +5 volts at pin #3 and ground at pin #12 of A1, the LM339 chip.

## Testing Your Trackball

Reinstall the springs, roller axles, single bearing and cue ball. Do not put the top on the case yet. Plug the trackball into the mouse port again and watch the action of the cursor as you move the cue ball. If the cursor moves in the proper direction in relation to the cue ball, you can go to the section titled "Finishing the Trackball."

If the cursor movements do not reflect your test movements of the cue ball, write notes about which direction the cursor moves in relation to left, right, up and down movements of the cue ball. Unplug the trackball and compare your notes to the tips in the appropriate trouble shooting section below.

## WICO Troubleshooting

This section is useful only if your finished WICO trackball is working, but the cursor is moving in the wrong direction. If your finished trackball is completely dead, check all of your wiring connections against Figures 1, 2 and 3.

If your notes show the cursor moved left as you moved the cue ball to the right, and vice versa, you should reverse the connections of the yellow and green wires. Connect the yellow wire to pin #4 of IC1 and the green wire to pin #6.

If your notes show the cursor moved up as you moved the cue ball down, and vice versa, you should reverse the connections of the blue and violet wires. Connect the blue wire to pin #8 of IC1 and the violet wire to pin #10.

If your notes show the cursor moved up or down as you moved the cue ball left or right, you should reverse the connections of the yellow/green pair of wires with the blue/violet pair of wires. Connect the green wire to pin #10, connect the blue wire to pin #4, connect the yellow wire to pin #8, and connect the violet wire to pin #6 of IC1. Now return to the trackball testing section above and perform the tests again. Keep in mind that if the left/right movements are reversed, you must now swap the connections of the blue and violet wires. Likewise, if the up/down movements are reversed, you must now swap the yellow and green wire.

## Atari CX22 Troubleshooting

This section is useful only if your finished Atari CX22 trackball is working, but the cursor is moving in the wrong direction. If your finished trackball is completely dead, set the new switch to its other position and try again. If the trackball is dead in both switch positions, check all of your wiring connections against Figures 3 and 4.

If your notes show the cursor moved left as you moved the cue ball to the right, and vice versa, you should reverse the connections of the wires at TP1 and TP2.

If your notes show the cursor moved up as you moved the cue ball down, and vice versa, you should reverse the connections of the wires at TP3 and TP4.

If your notes show the cursor moved left or right as you moved the ball up or down, you should exchange the pair of wires at TP1 and TP2 with the pair of wires at TP3 and TP4. Now return to the trackball testing section and perform the tests again.

## Finishing the Trackball

Unplug the trackball and prepare to install the top piece of the case. Place the new cord in the cut-out at the back of the case. Make sure the epoxy strain relief on the cable is on the inside of the case wall. Check all wiring to make sure no wires can move close to the axles, wheels or the cue ball. Loose wires should be secured to the case with a drop of rubber adhesive or silicon sealant.

When all wires are secured out of the way, set the top in place and rotate the cue ball. If the ball rotates freely, you can turn the case over and reinstall the screws to hold the top and bottom pieces together.

"NOW THAT IT CAN COMMUNICATE WITH OTHER COMPUTERS, IT SAYS IT DOESN'T WANT TO COMMUNICATE WITH US."

# Take ACTION! with Your Programming!

Number Three in a Series by Gayle Sims (c) 1988

Does everyone have disks and notebooks handy for this edition of our ACTION! tutorial? I hope so, because in this episode, I will introduce you to one of the main modules of ACTION!, the 'Editor', and some of the most used commands. You will use the editor each and every time you work with ACTION!, so you will need to become very familiar with it!!!

Once you have booted up your system, you will find yourself in the editor. I showed you how to select certain options (in our last episode) before each programming session. Once you have done that, type 'E' on the command line to return to the editor.

ACTION! does not care how you enter your code, or if it is uneven and unformatted. For your sake, I hope you will begin to format all of your coding! It will make your code a lot easier to look at the next time! The editor even allows you to compose your source code on your favorite word processor and import it into the editor, thus making use of the fine features of many word processors such as search and replace and macro entry.

The editor, when you first enter it, is in 'replace' mode. This means everything you type will be typed exactly and any existing text will be overwritten as you go. To place text in front of existing text, or anywhere else, you need 'insert' mode, <CNTRL><SHIFT>I. The new text you enter will be placed wherever you happened to have the cursor, and all other text after it will be pushed over without being rewritten. The <CNTRL><SHIFT>I toggles the feature, so if you wish to go back to replace mode, just enter the command again.

To clear an *entire* file, just enter <SHIFT><CLEAR> and everything will be erased, and you will be given a clean workspace. Once you have erased this text, it is gone for good, so please be careful!!!

Now, unless you want to enter the same text over and over again, you'll need to know how to save and load your files to disk. <CNTRL><SHIFT>W will prompt you with 'Write?' and you enter 'Dx:MYFILE.ACT', where 'x' is the device number you are going to use, and MYFILE.ACT is the name of the source code you want to save.

Remember, ACTION! works with a RAMDISK, so be sure not to forget to copy your files from RAM to a real disk before turning off your machine!

Once the file is saved, you load it, or any other source code file, back at any time. <CNTRL><SHIFT>R will prompt you with 'Read?'. Just enter the file path and name, such as "Dx:MYFILE.ACT." The .ACT extension reminds you that it is ACTION! source code, and not a compiled program.

The following command list will allow you to move around inside the editor, along with edit the text, and store or retrieve it from disk:

<CNTRL><left arrow> Moves your cursor one character to the left
<CNTRL><right arrow> Moves your cursor one character to the right
<CNTRL><up arrow> Moves your cursor one LINE above
<CNTRL><down arrow> Moves your cursor one LINE down
<CNTRL><SHIFT> > Moves your cursor to the end of the current line
<CNTRL><SHIFT> < Moves your cursor to the beginning of the current line
<CNTRL><SHIFT>H Takes you to the beginning of the file
<CNTRL><SHIFT>E Takes you to the end of the file
<CNTRL><SHIFT>F Allows you to 'find' a certain text field in your file <ENTER> after the first occurrence of your 'find' field will bring up the next one, if there are any more.
<CNTRL><DELETE> Deletes the character under the cursor, one at a time
<SHIFT><DELETE> Deletes the line your cursor is currently on
<CNTRL><SHIFT>U Restores the line you just deleted (if you have moved from the line you deleted, it will not work)
<SHIFT><INSERT> Inserts a line at your cursor's position
<CNTRL><INSERT> Inserts a space at your cursor's position
<CNTRL><SHIFT>R Read/Load file from disk (including text from other editors)
<CNTRL><SHIFT>W Write/Save file to disk

If you wish to import text from other editors, be sure that your lines are no longer than 79 characters, and end with EOL's, or <RETURN>. You can make any modifications once you have entered it into the ACTION! editor.

Once you have learned these simple commands, the rest of the work will come rather easily! Practice until next time!!!

I can be reached by US Mail at: Gayle R. Sims, Suite #6-216, PO Box 4005, Carmichael, CA 95609-4005

# Into the Eagle's Nest

## Reviewed by Bill Boles (MACE)

Well now.... Are we all ready for a little Deja-Vu?... Yes?... OK then, How many of you remember a program for the 8bits entitled Castle Wolfenstein... You know, the one in which you play the part of an allied soldier sent into a Nazi fortress to recover some secret plans? Well, Mindscape Inc. has released "Into the Eagle's Nest" for the ST. A game which is very similar to "Castle".

In this game, you also play a soldier given the task of accomplishing one of four tasks which is as follows: 1.) blow up the fortress; 2.) rescue a prisoner and blow up the fortress; 3.) rescue two prisoners and you know what; 4.) rescue three prisoners and once again blow up the fortress.

The games action is seen from above. By using the joystick (A big improvement over Castle Wolfenstein's clumsy Start, Select, and Option button control scheme), the player may move about, pick items up, unlock doors or shoot them open, and of course, shoot guards and officers.

Play begins on the ground floor of the fortress and the player may move about on the current level or take the elevator to another floor (provided he finds an elevator pass). As the game progresses, the player will come up against hundreds of guards, many in very large groups. These must be shot twice in order to kill them, and it must be done without any contact with your soldier, for when they touch you they inflict damage. Officers are a different matter... These guys just sit at the tables sleeping, and can be killed with no damage done to your character.

You must keep yourself armed with ammo at all times. Stacks of ammo are located all over the place and can be picked up by walking over them. also sprinkled about is food for your character, pendants and paintings which are worth points, keys to open steel doors, elevator passes, dynamite which, when shot will end your game real quick, and chests. The chests are like those found in "Castle" meaning you must shoot them to open them. Take care however. Some of those chests contain dynamite and again will end your game.

Once you obtain an elevator pass, you may get on the elevator (represented as a large square) and using the joystick, select the floor you wish to visit. When you find the detonator (or found the prisoner(s) and then the detonator) you may then destroy the fortress and save the day for the Allies. To do this, you merely shoot the detonator.

In all, despite the fact that "Nest" is just a clone of "Castle," it is far better than the older program. the sound, graphics and the easy to use controls make this one worth having. It is the kind of game that grows on you and makes you try it "Just one more time!".

On a scale of 1 to 10, I give this one an 8.

# Strip Poker: A Sizzling Game of Chance (or so it says on the box)

Review by Gordon Totty (MACE)

I waited a while to get this one. It is out in an 8bit version, but I saved my money and bided my time. I knew I would be getting an ST someday, and I knew that when I did this would be one of the software packages I would buy for it. Oh, boy, I was going to look at models showing all in a sizzling game, with all the superior graphics abilities of the ST. Just thinking of all those feminine pixels made me glow with anticipation. I am a lousy poker player, yet I hoped that my poor skills would allow me the chance to achieve the ultimate, the awesome oggle.

I used to subscribe to Playboy in the 1960s. As I remember the routine, one pretended interest in the articles about sports, fancy cars, the pretentious Playboy "philosophy," jazz, fiction, interviews, etc. Yet, in order, the best of the magazine was: girls, cartoons, written jokes, advertising, and, dead last, all the other junk. Even an old satyr would find the hedonism, the materialism, which dripped from every page of the magazine (at least back then), oppressive. One couldn't stand to actually read much of it. Its purpose was to fill the primal need of boys to look at girls and it did so far better than the Sears & Roebuck catalog ever did for Grandfather.

As I thought of Strip Poker, I imagined the benefit of Playboy without the phoniness, the pretentiousness, the pure, undistilled crap from the jerk in the bathrobe. I was disappointed.

Shall we take a peek at it? There isn't much for me to say, really, and I recognize that, in this arena of aesthetics, many of you will not agree with me at all. But, beauty is in the eye of the beholder, and my eye did not behold any.

First, the sizzling game. Boring! I have never really learned to play poker, much less play it well. I do not know the rules. I do not know what beats what, in detail, or the various odds. Oh, I know three aces beats three tens, and that a full house is a very strong hand. I know that if you are dealt a full house you "stand pat" (and don't smile); that you don't discard the pair to go for four of a kind. I learned that much from cowboy movies. But what is it called when all the cards in your hand are of the same suit? What does that beat? I really do not know. What does a straight beat? Beats me.

So, naturally, I began the game against Melissa, "a highly skilled player". I beat her out of all three pieces of her clothes in nothing flat. She's a notorious bluffer, who will hold ten high over nothing - not even a lousy pair - and try to buy the pot. I caught her at this at least once or twice.

The game moves very fast, and as I said above, was very quickly boring to me. The tension of a real poker game, with real stakes, is just not at all present. I know, as I used to lose two or three dollars in an evening playing for pennies just to be sociable with some acquaintances. In Strip Poker, you can get all the money you need if you lose your initial stake, at $100 per item of clothing.

Perhaps the game might have been more interesting if I had not cheated. But, cheat I did, and I kept all my clothes on. The thought of my wife entering the room and seeing me seated semi-nude in front of the monitor muttering something to Melissa was chilling to say the least. I do not want to be sent away to recover, thank you. (My do-it-yourself therapy kit is working just fine. I've already fallen in love with my self-analyst.)

What was I muttering? I was muttering, "Is that all? It's over already? No more to this?" Enough of this pretentious drivel, reviewing the "game," before you think of me as sitting here typing this in my bathrobe and pipe. Or, do you want me to go on about the "philosophy" of games....

Let's move on to "art" appreciation. Not much to say here either, folks. First, however, let me note what I am about to say will earn me a punch in the mouth should I ever meet one of the creative people from the Strip Poker project, and that person used a spouse or friend as a model. They look, and "converse," like hardened prostitutes. There are no smiles, no humor, just business.

Returning to Playboy, at least the "playmates" were depicted as enjoying baking chocolate chip cookies with proud Mom, or going to the ballpark with dear, old Dad. You were given an opportunity to imagine the model was "real," before turning the page and drooling on her staples.

This lack might have been satisfied in Strip Poker with a better use of "conversation" during play. In fact, it would not have been difficult to incorporate limited two-way communication to enhance the entertainment value. As it is, you are treated only to a few choice comments like, "Next time. I cut the cards!" Or something like that.

Suzi has a vacant, blank expression. You cannot see her eyes; her mouth appears open. She is totally dehumanized (an odd expression for me to apply to a cartoon, but I hope you get the point). Is she on drugs? Melissa, at least, does have visible eyes.

Finally, how would one rate them as physical beauties in other regions of the anatomy? Difficult to discuss, politely, but I shall try. You knew I would, didn't you? I feel I must, to help keep other pilgrims from falling into this slough. Two points need to be made.

First, they are "plastic," evidencing a young American male's fantasy view of a topless female.

By that, I mean that certain objects of interest are centered too high on the torso, and extend far too high into the atmosphere for even a well-endowed female, who happens to be reposing on her back. If I am not correct in this, then perhaps I have missed something, other than the barbaric use of silicon, in my life.

Second, and more difficult to discuss politely, they both ... er. ... well, both ladies are shown as ... you know, nude ... like totally nude ... oh, dammit, they're shaved!

That's it: shaved and depraved! And if you listen to me, your money should be saved.

Much as I hate to admit it, Playboy is a better purchase if you want to look at naked women. Strip Poker was a waste of my money, and I cannot understand what it is that is making people buy the additional disks once they have had a chance to see the original product. Motes in the eyes of the beholders, I guess.



## Slaygon

ST Software Review by Steve Mileski (GLASS)

Your Mission...to infiltrate and destroy the headquarters of the evil Cybordynamics! Your World...the halls and rooms of the corporation, filled with locked doors, enemy robots, force fields, ion-beams, and land mines. Your Vehicle... Slaygon, a supertank of your own design.

This is not an adventure where you can just go in and shoot everything up, it requires wits, strategy, and yes, a little luck.

Slaygon is a mouse-controlled graphics maze game where you pilot your tank in search of the tools you need to destroy the facility. Your view is through the control panel which allows you to control your plotter, scanner, sensors, laser, cloaker, and shields. Part of the viewscreen contains the map your plotter draws as you maneuver the passages, if you have it on. Of course, use of every thing takes energy and when your energy is gone you die, but careful use of equipment keeps you moving until you can replenish it. There are eight storage holds to store found items until needed.

The graphics are, if repetitious, impressive. The playaction with the mouse is convenient, as are the selection and uses of equipment and items. Your game can be saved and reloaded to continue later, however, only one game can be saved on a disk. Slaygon comes on two disks: disk A is copy-protected (too bad) but disk B isn't. The B disk is where the game is saved, so if you have spare disks more games can be saved.

The only improvements I would add to the game would be a magnify for the map, it's small and hard to read, and tank movement using the cursor arrows (and the mouse) for rapid movement though known territory.

The game is addictive and keeps me coming back for more. The 16-page manual that comes with the game is enjoyable, informative, and well written. It also includes a Game Hints section. This section could be sealed so you don't accidentally view it before you are ready; this happened to me.

A final note: Leaving the game returns you to the GEM Desktop so you don't have to re-boot, something not found in many popular games.

I think that Slaygon will be an entertainment hit. Slaygon, at $39.95 retail, is brought to you by MicroDeal, who also handles games like Time Bandits, Air Ball, Leather Neck, and Gold Runner.

MicroDeal is a sister company of MichTron, of Pontiac, Michigan. An agreement between the two companies leaves MicroDeal handling entertainment software while MichTron handles productivity software. They both have an American and European branch.

Watch for good quality releases from the companies in the near future.

# Detachable 1200XL Keyboard for Your 8bit Atari

By Kip Kiefer (MACE)

Several years ago, I bought an Atari 800 parts kit (a non-working unit) and had it working within a few minutes. It had a bad voltage regulator and I had a replacement laying on my work bench, which explains the expedience of repair.

The only thing that still needed to be repaired was the keyboard. Half of the key-tops were missing; a couple of the others weren't working. Since I wanted to use the computer right away, I found a cheap substitute keyboard at Radio Shack -- an Atari 1200XL keyboard (Cat.#277-1018).

Of course, it required a little work to wire it up to the computer. What's required is bringing the inputs of the 1200XL's keyboard encoder chips out to the adapter cable connecting the keyboard to the computer. Everything you need to do this can be found at Radio Shack. The following is a list of parts and tools you will need.

First the tools: (1) 25 watt soldering iron & solder; (1) solder wick, solder sucker or equivalent; (1) #0 Phillips screwdriver; (1) pair of wire strippers; (1) pair of diagonal wire cutters

Now for the parts: (1) Atari 1200XL keyboard part #ca060046 (Radio Shack #277-1018); (2) 16-pin low profile IC sockets (16-pin dip sockets); (2) 16-pin dip headers (no ribbon wires attached); (1) 5-foot piece of 25-conductor ribbon wire (Radio Shack #278-772); (1) pack "assorted" heat shrink tubing; (1) pair of mating connectors (with at least 22 pins). To make assembly easier, the instructions will be broken down into several parts.

## Preparing the Keyboard

Place the keyboard face down on a table or work bench. Leave the keyboard in this position until its reassembly is completed. Don't start this project if you don't have the time to complete this section at one time. Remove the screws from the keyboard (qty:21 screws). Lift the PC board off the keyboard. (Warning: Do not attempt to remove the plastic from the PC board, as this will damage the keyboard.) Using the soldering iron (and solder wick or solder sucker), remove the two 4051 IC chips (take note where pin #1 is.). Also remove the 15-pin connector (and wire). Solder the two 16-pin IC sockets in place of the two 4051 IC's that you've just removed. (Locate pin #1 of the IC socket in the same position as pin #1 of the 4051 IC chip.) Place the PC board on the keyboard and re-install the screws. You may turn the keyboard over now.

## Making the Adapter Cable

To make it easier to understand, I'm going to call the two chips on the Atari 1200XL keyboard A1 & A2. These aren't Atari's official part designations, but since I've never seen a parts list or a schematic for the 1200XL, they will do. In Fig. 1, you will see the layout of the 1200XL keyboard bottom. The chart also shown in Fig. 1 shows the equivalent chips for the other models. In Fig. 2, you'll see the connections required to connect the 1200XL keyboard to your computer. The two 16-pin dip headers plug into the IC sockets that you've installed; you will be soldering wires onto the dip headers and the keyboard connector pads per Fig. 2. I'll let you decide which kind of connector you wish to use.

One tip is to wire the adapter cable so the connector (mounted on the computer case) pin connections match your computer keyboard's connections. This will keep your connections more straightforward. The best place to mount a connector for the keyboard on a Atari 400 or 800 is on the left side of the computer (the side opposite the power connector).

This is how I did it. Being somewhat of a scavenger at heart, what I used for connectors was somewhat different than their normal application.

I used a 22-pin Cinch (double-sided) edge connector (wired to the computer keyboard connector per Fig. 3) and a single-side PC (Printed Circuit) Board completed the connection. The PC board is cut short per Fig. 4. If you're wiring the keyboard per the chart in Fig. 3, your keyboard should look like Fig. 5 when you're done.

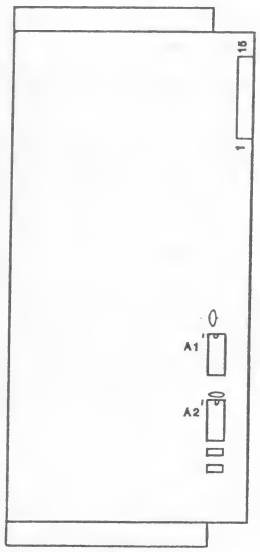
Figure 6 shows the Cinch connector as viewed from the rear. Figure 7 shows how to dress the wires from the 1200XL keyboard. The reason I wired the connector in the manner I did (per Fig. 3), was so I wouldn't have to worry about the connector's polarity (you can plug it in either way and it works the same), which may make the routing of the keyboard cable easier.

## The Way I Didn't Tell You About

The reason that I didn't tell you about this last way of connecting the 1200XL keyboard is that it has the least amount of options. You can only have the 1200XL keyboard operational (not the original keyboard or a optional keypad). An additional drawback to this method is the increased possibility of shorting out the 5-volt power supply. It requires the removal of the computer's keyboard encoder chips, and the adapter cable will run from the 1200XL keyboard connector to two 16-pin dip headers plugged into the computer's keyboard encoder chip sockets (see Fig. 8).

I do not recommend using this last method of connecting the keyboard to your computer. Although it would put your computer into the same configuration as the 1200XL, the drawbacks outweigh the benefits.

FIGURE 1
1200XL KEYBOARD BOTTOM VIEW




| 1200 XL | 400 | 800 | 800XL | 800XL | 130XE |
|---|---|---|---|---|---|
| A1 | Z102 | Z103 | U22 | U24 | U24 |
| A2 | Z101 | Z104 | U23 | U25 | U25 |

FIGURE 2

| 1200 XL | 400 | 800 | 800XL 600XL | 130XE 65XE |
|---|---|---|---|---|
| A1-14 | 1 | 1 | 1 | 13 |
| A1-1 | 2 | 2 | 2 | 14 |
| A1-2 | 3 | 3 | 3 | 12 |
| A1-15 | 4 | 4 | 4 | 15 |
| A1-4 | 5 | 5 | 5 | 7 |
| A1-13 | 6 | 6 | 6 | 18 |
| A1-12 | 7 | 7 | 7 | 5 |
| A1-5 | 8 | 8 | 8 | 8 |
| K-1 | 9 | 9 | 9 | 20 |
| A2-1 | 10 | 10 | 10 | 19 |
| A2-2 | 11 | 11 | 11 | 4 |
| A2-15 | 12 | 12 | 12 | 6 |
| A2-4 | 13 | 13 | 13 | 9 |
| A2-5 | 14 | 14 | 14 | 10 |
| A2-14 | 15 | 15 | 15 | 11 |
| A2-13 | 16 | 16 | 16 | 17 |
| A2-12 | 17 | 17 | 17 | 16 |
| K-10 | 18 | J114-1 | 23 | 24 |
| K-13 | 19 | J114-3 | 21 | 23 |
| K-12 | 20 | J114-2 | 22 | 22 |
| K-11 | 21 | J114-4 | 20 | 21 |
| K-14 | 22 | GND | 18 | 3 |

A1-X = CHIP A1, PIN X
A2-X = CHIP A2, PIN X
K-X = KEYBOARD PIN X

FIGURE 3

| 1200 XL | KEY-BD. SIDE | COMPUTER SIDE | 400 | 800 |
|---|---|---|---|---|
| A1-14 | 1 | 1,Z | 1 | 1 |
| A1-1 | 2 | 2,Y | 2 | 2 |
| A1-2 | 3 | 3,X | 3 | 3 |
| A1-15 | 4 | 4,W | 4 | 4 |
| A1-4 | 5 | 5,V | 5 | 5 |
| A1-13 | 6 | 6,U | 6 | 6 |
| A1-12 | 7 | 7,T | 7 | 7 |
| A1-5 | 8 | 8,S | 8 | 8 |
| K-1 | 9 | 9,R | 9 | 9 |
| A2-1 | 10 | 10,P | 10 | 10 |
| A2-2 | 11 | 11,N | 11 | 11 |
| A2-15 | 12 | 12,M | 12 | 12 |
| A2-4 | 13 | 13,L | 13 | 13 |
| A2-5 | 14 | 14,K | 14 | 14 |
| A2-14 | 15 | 15,J | 15 | 15 |
| A2-13 | 16 | 16,H | 16 | 16 |
| A2-12 | 17 | 17,F | 17 | 17 |
| K-10 | 18 | 18,E | 18 | J114-1 |
| K-13 | 19 | 19,D | 19 | J114-3 |
| K-12 | 20 | 20,C | 20 | J114-2 |
| K-11 | 21 | 21,B | 21 | J114-4 |
| K-14 | 22 | 22,A | 22 | GND |

A1-X = CHIP A1, PIN X
A2-X = CHIP A2, PIN X
K-X = KEYBOARD CONNECTOR, PIN X

FIGURE 4

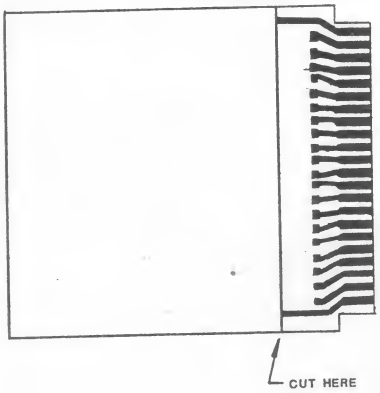



FIGURE 5

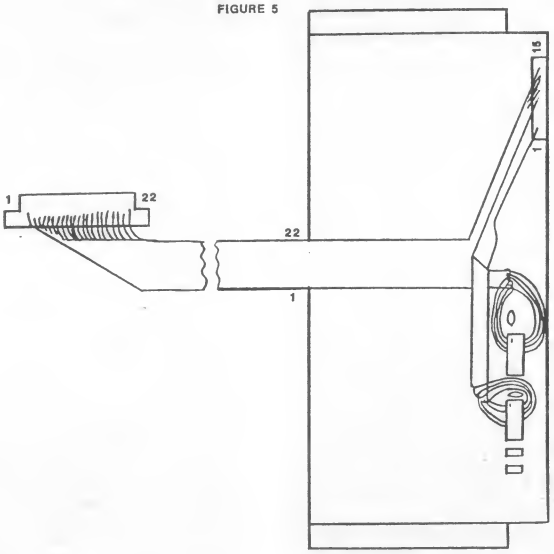



FIGURE 6

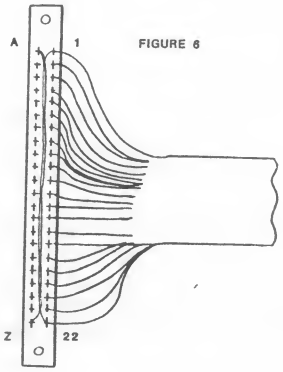



FIGURE 7

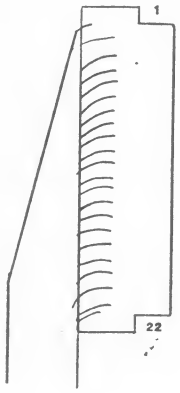



FIGURE 8

| 1200 XL | SOURCE/ FUNCTION |
|---|---|
| 1 | CTRL/ SHIFT/ BREAK |
| 2 | NC |
| 3 | A2-3 |
| 4 | A2-11 |
| 5 | A2-10 |
| 6 | A2-9 |
| 7 | A1-11 |
| 8 | A1-10 |
| 9 | A1-9 |
| 10 | RESET |
| 11 | START |
| 12 | SELECT |
| 13 | OPTION |
| 14 | GND |
| 15 | +5V |

FIGURE 9 — MISC. DIAGRAMS

| RESET | START | OPTION | F1 | F2 | F3 | F4 | HELP | ATARI | BREAK |
|---|---|---|---|---|---|---|---|---|---|

TYPICAL IC PIN CONFIGURATION

# Flying The ST

by Allen P. Bargen (c)

commentary on the world of Atari St computers

## *Saving Time...* or at least that's what they told me when I bought this thing!

Buying a computer is a lot like smoking or taking drugs. There are lots of deterrents to doing it, but people just keep on buying them anyway. The general premise for buying a computer is that it will *save you time...*supposedly one of our most expensive commodities and something most of us do not wish to waste ( well, perhaps with the exception of those few Sunday afternoons when we vegetate in preparation of another hectic monday).

Anyway, while it is certainly true that a computer CAN save you a lot of time and effort - in the long run, it is also quite true to say that they require some very substantial up front investments of time and energy to get to the point where they become productive functional tools. If the primary purpose of your computer system is entertainment, then all of this is redundant of course, but it would be a safe bet to say that the majority of ST users are what I refer to as complete computerists. That is to say, people who use their systems for a wide range of applications.

One might presume that I know a fair bit about computers, after all, they have been part of my life for a number of years now. They stare at me from the desk at the office, and there are certainly enough of them around the sanctum sanctorum here to warrant some degree of agreement that I know a lot about them. I have used computers for word processing for so long now that I would have to hire someone to change the ribbon on the typewriter that now graces a back corner of a desk, long since cluttered with last month's articles and a variety of computer related advertisements. They also do all of my Database work, spreadsheets, and by gosh, the occasion adventure game has been known to slip into high gear once in a while when the time comes to say, break for a moment of insanity. All of this variety makes you as an individual more of an expert within the parameters of the system you apply your skill to.

The truth of the matter is that what you know about your personal computer today is relative only to today, and true only of yesterday. Things change so fast that by the time you become expert in one area, it has either become redundant due to technological change or outdated by updates to the software you doubtless spent big bucks on.

The true computer neophyte needs to constantly absorb new information, assimilate new data, and learn new concepts to simply keep abreast of what the computer world is all about. It becomes a degree or two more difficult if one attempts to maintain a high level of information about more than one type of computer.

Only the staunchest computerist will do that. Perhaps we should consider it a triumph if we can be informed and informative about our main interest, the Atari ST and MEGA series of computers. That by itself is no easy feat since we are seeing such a surge of new and well-written software.

Presumably it is fair to say that the majority of us are not, nor do we want to be tecchies ( That's not the same as a Trekkie, but close enuff !). Let's leave the repairs to experts. However, we can all be well-skilled and competent in the area of application, and software.

It has always impressed me that MS-DOS people, you know, the IBM types, are generally very well-skilled in one or two areas with their computers. I have met people, for instance, who can tell you every keystroke required to underline a word in Word Perfect ( a horrible program to use on the IBM, by the way, compared to the ST), yet who are totally incapable of using their computer for budget preparation or preparing a simple drawing on the screen. These are computer users only, not computer enthusiasts as we know them. Now nothing here suggests that we should think any less of people like that. After all, most of them do not have home computer systems.

ST owners for the most part, I am delighted to say, are real computer users. Almost all people I know who own ST computers use them for a wide range of applications. Yes, we all do have a favourite use for them, but I dare say that most of us use them for everything from their inevitable game play to serious uses such as interactive music via the MIDI interface and sophisticated drawing by means of CAD programs and their related programs.

Many people now use their computers in the rapidly growing field of Desktop publshing. ( no kidding !) If a biography is ever written for the ST, it will have to include the impact the ST will have made to this field. Many of my friends now own 24-pin printers or laser printers and have started cottage industries selling professional page layout services. It's nice to see people expanding what was once a hobby into a part-time occupation, or even a full-time business.

In addition to these program applications, there are many graphic design programs and complex, colorful computer drawing by means of a number of well-written Graphics drawing programs such as Degas Elite. Finally, there is a dynamic and growing field of creative programming through the ever-expanding range of languages for the ST.

Many of these applications are part of the normal use for most ST computers. Perhaps this is because most ST systems sold to date still find their way into the home environment, rather than offices. What that eventually does, more by accident than design, is to make ST users very well-informed about their computers. It does force owners to learn a lot on their own, an experience that can be frustrating and rewarding. Since the ST and MEGA have yet to make any significant dent on the office market, the question is whether that will eventually change and whether Atari itself wants it to.

I suspect that Atari still has not made a real commitment to bringing the machine into the business world because they still do not have the required channels to market their systems, and in part because they do not wish to invest the capital required to advertize them properly.

For us, perhaps that's not such a bad thing. It does in the end, make us better, and wiser users, with a genuine need to come together in groups like M.A.C.E. to share our common experiences. It certainly does much to help move these systems into genuine time savers, and that's the bottom line for all of us.

# GRAPHics Paper for 8bit Programmers

by Bob Retelle, Copyright 1988

When programming in one of the Atari's several text modes, it's sometimes nice to create a customized layout on paper first, before coding in the lines which will create a display on the screen. If you've tried using normal graph paper for this however, you've no doubt discovered that the spaces which characters occupy on the screen are *not* square! A layout created on squared off graph paper may look stretched and distorted when viewed on the computer's screen.

With this in mind, I wrote this little program which will print graph paper whose proportions match those of several of the Atari text modes. This version works with an Epson printer, or one which emulates the Epson.When you run the program, it will ask you which Graphics Mode you want to print graph paper for. You can choose among modes zero, one or two. These also correspond to the multi-color Antic modes four and five for multi-colored character graphics.

Be sure your printer is turned on, and online, then press any key to start printing. Because the graph paper is printed using the high resolution graphics capabilities of the printer, it will take several minutes to finish each page. If you plan to be using a lot of copies, it would probably be faster and easier to just print one of each mode and have them photocopied. I generally just print one or two at the beginning of each programming project.

Each sheet contains spaces for you to identify the screen by the name of the program, it's current revision number, and the date. The rows and columns are also numbered along the edges, to allow easy calculation of *position* statements.

Using this little printer utility, you should be able to design all kinds of terrific looking custom screens for all your programming projects!

```
10 REM ATARI GRAPHICS PAPER
15 REM MARCH 1988 by ROBERT J. RETELLE
20 REM PRINTS GRAPH PAPER PROPORTIONED TO FIT ATARI TEXT MODES 0-2
25 REM CAN ALSO BE USED FOR GRAPHICS MODE 3 AND MULTI-COLORED TEXT MODES IR4 AND IR5
30 REM
35 REM
40 OPEN #1,4,0,"K:":REM OPEN KEYBOARD FOR INPUT
50 PRINT CHR$(125):REM CLEAR SCREEN
60 PRINT :PRINT "WHICH GRAPHICS MODE DO YOU WANT TO  PRINT GRAPH PAPER FOR? (0-2)";:GET #1,A
70 GMODE=A-48:PRINT GMODE:IF GMODE<0 OR GMODE>2 THEN 50
80 PRINT :PRINT "MAKE SURE PRINTER IS SET UP":PRINT "THEN PRESS ANY KEY TO START":GET #1,A
90 PRINT :PRINT "PRINTING GRAPHICS PAPER FOR MODE ";GMODE
100 TRAP 3000
1000 LPRINT CHR$(27);CHR$(64):REM RESET PRINTER
1010 LPRINT "PROGRAM:_____
REVISION:_____  DATE:_____"
1020 LPRINT
1030 REM CREATE STRINGS TO HOLD BIT PATTERNS
1040 DIM A$(432),X$(433),B$(41)
1100 A$(1)=CHR$(1):A$(432)=CHR$(1):A$(2)=A$:REM HORIZONTAL STRAIGHT LINE
1110 B$(1,1)=CHR$(255):REM VERTICAL LINE
1120 IF GMODE=2 THEN 1160
1130 FOR I=2 TO 18:B$(I,I)=CHR$(0):NEXT I:REM FILL LINE SEGMENT WITH BLANKS
1140 X=1:FOR I=1 TO 24:X$(X,X+18)=B$:X=X+18:NEXT I:X$(432,432)=CHR$(255):REM REPLICATE SEGMENT 24 TIMES
1150 GOTO 1200
1160 FOR I=2 TO 36:B$(I,I)=CHR$(0):NEXT I:REM FILL LINE SEGMENT WITH BLANKS
1170 X=1:FOR I=1 TO 12:X$(X,X+36)=B$:X=X+36:NEXT I:X$(432,432)=CHR$(255):REM REPLICATE SEGMENT 12 TIMES
1200 GOSUB 5000:REM PRINT TOP NUMBER LINE
1300 X=39:IF GMODE>0 THEN X=19
1400 FOR I=0 TO X
1500 LPRINT CHR$(27);CHR$(65);CHR$(8);CHR$(27);CHR$(75);CHR$(176);CHR$(1);A$:REM PRINT HORIZONTAL LINE
1510 LPRINT CHR$(27);CHR$(75);CHR$(176); CHR$(1);X$;" ";I:REM PRINT VERTICAL LINES AND RIGHT HAND COLUMN NUMBER
1520 LPRINT CHR$(27);CHR$(65);CHR$(1);CHR$(27);CHR$(75);CHR$(176);CHR$(1);X$:REM PRINT VERTICAL LINES
1530 IF GMODE=0 THEN 1560
1540 LPRINT CHR$(27);CHR$(65);CHR$(7):REM ADVANCE PAPER 7 DOTS
1550 LPRINT CHR$(27);CHR$(65);CHR$(1);CHR$(27);CHR$(75);CHR$(176);CHR$(1);X$:REM PRINT VERTICAL LINES FOR MODE 2
1560 NEXT I
1570 LPRINT CHR$(27);CHR$(65);CHR$(8);CHR$(27);CHR$(75);CHR$(176);CHR$(1);A$:REM PRINT LAST HORIZONTAL LINE
1580 LPRINT CHR$(27);CHR$(65);CHR$(3):REM ADVANCE PAPER FOR ROW NUMBER LINE
1590 GOSUB 5000:REM PRINT BOTTOM ROW NUMBER LINE
1600 LPRINT CHR$(27);CHR$(64):REM RESET PRINTER
1700 PRINT :PRINT "CONTINUE? (Y/N)":GET #1,A:IF A=89 THEN RUN
1800 END
3000 PRINT :PRINT :PRINT "PRINTER DOES NOT RESPOND!":REM ERROR TRAPPING
3010 PRINT :PRINT "CHECK PRINTER AND INTERFACE,"
3020 PRINT "THEN PRESS ANY KEY TO CONTINUE."
3030 GET #1,A:GOTO 80
5000 IF GMODE=2 THEN LPRINT "....11....10.....9.....8.....7.....6....5.....4.....3.....2.....1.....0":RETURN
5010 LPRINT ".23.22.21.20.19.18.17.16.15.14.13.12.11.10.9..8..7..6..5..4..3..2..1..0":RETURN
5020 REM *NOTE* THE PERIODS IN THE ABOVE LINES ARE ONLY TO SHOW HOW MANY SPACES SHOULD GO BETWEEN THE NUMBERS... DON'T TYPE THEM! USE SPACES!
```

# ST Notes: Star NX-1000 Rainbow Printer

## Review by LeRoy Valley (TAG)

How many times have you wanted to dump that graphics masterpiece on your screen to a printer...only in full color, not shades of grey! Some of you may have even bought a color printer to do just that, and then discovered that the printer lacks many of the features found on a "normal" printer.

Text output generally takes a back seat on most color printers, and the only answer was to either buy both types of printers, or to spend a small fortune on one that could handle both color and text equally well.

Not wanting two printers cluttering up my desk (and not able to afford a really *good* color printer), I stuck with my trusty Panasonic 1091i II which, by the way, I consider *the* best 9-pin printer around.

Then I saw an ad one day for the Star NX-1000 Rainbow (Not the Star NX-1000, which is a "normal" one color printer). The ad claimed the printer (9-pin dot matrix) had loads of built-in fonts, features, and even supported color! The list price was $319, but I found it for $239 at Microtyme (1-800-255-5835), so of course I *had* to get one. I figured that once I tried the printer out, I would sell either the 1091i or the NX-1000. Either way, I wouldn't be out much money.

The printer was delivered the next day in a small box. Pulling out the NX-1000, I noticed two things immediately. The printer was small (much smaller than the 1091i) and I couldn't see any tractor feed!

Thinking furiously, I couldn't remember whether I'd asked the dealer if it had one or not! Grabbing the manual, I started reading...and found that the tractor feed was located behind the platen, not on top of it. No more wasted sheets of paper!

Lifting off a plastic access panel on the back revealed the tractors, and I promptly loaded some paper. Since the paper feeds directly into the back of the printer, Star moved the parallel connector to the side of the printer. At last, someone heard my prayers! Running the self test, I was impressed with the quality (and quantity) of the NLQ fonts.

I had someone ask me which printed better, the Panasonic or the Star. The only response I could give was to tell him to look for himself. The fonts are different, so different people are going to prefer one or the other. They both form excellent NLQ letters, although I have to admit that I really like the Bold PS font on the Panasonic.

OK, let's take a quick look at some of the features that this little printer boasts, and then we'll cover some of them in more detail:

*144 cps draft / 36 cps NLQ
*7 color printing
*Friction and tractor feed
*Semi-automatic sheet loading
*8K data buffer
*Membrane control panel
*8 NLQ fonts built in
*4 pitch sizes
*Extra large characters
*Proportional print
*Emulates Epson LX-800 and IBM Proprinter II

Wait a minute, seven-color printing? How good is a graphics dump of a Degas picture going to look with only seven colors? The seven colors refers to the colors that you can directly access with a simple printer command.

Using the Epson JX80 printer driver (found in the Spring 1987 STart magazine), the printer will print over 400 different colors. Degas pictures dumped with this driver look very much like the original.

The printer prints the picture with three passes for each line, one pass for each of the primary colors. The ribbon used is a fabric ribbon that has four colors on it (yellow, red, blue, black), but the driver currently uses only three of these colors

(mixing all three to obtain black). These color ribbons cost $9.00 each directly from Star. The printer will also accept the black ribbon used on the regular Star NX-1000, and these ribbons can be had for $6.00.

Currently, the only way to print Spectrum pictures, is to convert them to Degas and then print them. While Spectrum is displaying the picture, the screen dump routine is inoperative. So...I'm currently working on a program to read a Spectrum file from disk and send it to the NX-1000.

A big feature on this printer is the number of fonts that it has. In NLQ mode you can print in Courier, San Serif, Orator (with lowercase letters), or ORATOR (with small capitals for lowercase)). All of these NLQ fonts work with italics and/or proportional in any pitch (10, 12, 17, 20 cpi)! The printer also offers double height, double width AND quad height, quad width printing!

The feature I like best on the printer is the semi-automatic sheet feeder. Let's say you've got your form feed paper in, and all you want to do is address one envelope. Normally you'd pull out the form feed paper, print the envelope, then reload your paper.

With the NX-1000, all you do is select Paper Park from the front control panel, and the tractor feed will back your paper out from the platen. Now put the printer in friction mode and place your envelope in the feed slot, and presto! The envelope feeds in ready to be addressed.

When you're finished, simply unpark the paper from the control panel, and the tractor fed paper will load back in automatically! (By the way, this is the first printer that I've owned that prints on envelopes without smearing.)

Star has given the NX-1000 a generous 8K buffer (great for downloading!) and the membrane control panel lets you set a lot of the features easily. Star has also given us an easy way to set many of the features from within our favorite program. Using a simple command like "((C))1Test" will print the word test in red! Any time that the printer sees the double parens with a recognized code, it will set the feature!

Well, you're probably wondering which printer I kept by now. Suffice to say someone else is now enjoying my Panasonic.

The NX-1000 Rainbow does an excellent job as a standard text printer, but the added dimension of color really makes it a worth while investment!

My GEnie mailstop is L.VALLEY. Let me know what you like (or don't like) about my column. I really would appreciate some feedback. See you all next month.

## Trailblazer from Mindscape

### by The Unknown Demoer (CACE)

Hey gang, check it out! We have got a hot one for you -- Trailblazer! by Mindscape, Inc. As the package says, "The speed is terrific as you blaze down the trail of the hyperspatial color grid. Your opponent is left in a cloud of dust as you effortlessly leap over black holes, purple walls, blue bouncers and even the terrible cyan nasty zone. Oh No! You missed the edge! As you plummet into the blackness, you see your opponent streak by to the finish line. You limp on in, vowing to retake the lead in the next race!"

The game features "high speed action, graphics and sound that push your computer to the limit, split screen point of view play, 20 fixed courses and a random option, as well as five play modes plus a devilish computer opponent" says the back of the package.

Now what is in the package? A catalog of programs (ST owners fare better than 8bit by a margin of 2 to 1.), a registration card, an ad for a personalized story book for your child and the documentation for TrailBlazer. Really folks, this is a nifty game. Sound leaves a bit to be desired but all else is fast and fun. I like it.

[CACE note: Come to the meeting, Saturday, May 14th. This great game could be yours for only $2 immediately following the demo.]

# For 520ST, 1040ST, 520STfm and MEGA

## MEMORY: Up to Four Megabytes on ONE board, NO SOLDERING!!!

Expand your St's memory to ONE Megabyte, TWO and ONE-HALF Megabytes or even FOUR Megabytes with the tech-specialities plug-in memory modules.

520ST modules use 256K DRAMs for upgrades to 1 MB and 1 Megabit DIPs for 2-1/2 and 4 MB upgrades. All boards are fully socketed and the expandable boards can be configured for either 256K or 1 Mb chips. This means that you can start by upgrading your 520 to one Megabyte and later move up to either 2.5 or even 4 Megabytes--the maximum for any ST, even the Mega! Installation is completely solder-free and comes with detailed illustrated instructions. All upgrades come with a one (1) year limited warranty.

Upgrade your 1040ST or 520STfm just as easily as a 520ST! Send us your 520STfm and we will install the second bank of memory complete for only $198.00 plus shipping. Or install one of our 1040 memory boards and upgrade your ST to 2-1/2 or even 4 Megabytes.

Limited space above the 1040 mother board prohibits the use of conventional sockets in one bank. Optional "ZERO Height" sockets allow you to have this bank socketed too, so you can plug in or exchange the expensive 1 Mbit chips. The "ZERO-Height" socket kit is also available separately so you can install it at any time!

All memory boards fit under the R/F shield. The CPU is completely available for any future enhancements (blitter, coprocessor, etc.). No soldering is required. Upgrade any ST to 2 or 4 MB with no trace cutting and no additional parts except for DRAMs. All boards are also available with an optional realtime clock, and all boards are tested for continuity. Populated boards are tested with chips installed.

| | | |
|---|---|---|
| 520A: | Socketed, no RAM | $129 |
| 520B: | 1 B, socketed | $269 |
| 520C: | 2.5 MB, socketed | $745 |
| 520D: | 4B | $1299 |
| 520-1: | 1 B, non-expandable | $198 |
| 1040A: | 1 Bank sockets, no RAM | $110 |
| 1040B: | Fully socketed, no RAM | $149 |
| 1040C: | 2.5 MB + 1 bank sockets | $745 |
| 1040D: | 4 MB | $1299 |
| 1040K: | Kit w/all parts, no RAM | $ 68 |
| | Clock Option on Memory Board | $ 30 |
| | Clock, stand-alone 520/1040 | $ 38 |

Above prices correct on 4-15-88. Prices of populated boards subject to chip adjustments to meet fluctuating DRAM prices.

Host adapter cards come with software and DMA cable. They can also be supplied with case and 6' round shielded SCSI cable with embedded power supply lines. Max. cable length is 20', additional connec- tors can be installed through mass termination.
Prices after the "/" are for host adapters with case and 6' SCSI cable.

| | | | |
|---|---|---|---|
| 1 port | 79/119 | full SCSI | 119/159 |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## EXPANDABLE Hard Drive Kits

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1. 10" x 6.5" x 15" with full SCS Interface
-150 W PC power supply with fan
-room for up to 5 half-ht hard drives or comb. - full/half ht.
-controller for up to 4 hard drives for limited time only
-mounts on floor, under desk or on desktop
-can power up 520STand has room for drives

| | | | |
|---|---|---|---|
| No Drives--Install your own | | | $385 |
| 10 MB | $485 | 30 MB | $675 |
| 20 MB | $595 | 40 MB ST251 | $845 |
| 40 MB full height high speed | | | $795 |

2. 18" x 15" x 3" with single port host adapter
-ready for to 2 1/2 ht hard disks
-65 W power supply with fan
-can be placed under monitor

| | | | |
|---|---|---|---|
| No Drives--Install your own | | | $295 |
| 10 MB | $395 | 30 MB | $615 |
| 20 MB | $525 | 40 MB ST251 | $795 |

3. 4.5" wide x 6" high x 13" deep with single port host adapter
-ready for 2 1/2 height or 1 full height drive
-55 W power supply
-optional fan available (add $14)

| | | | |
|---|---|---|---|
| No Drives--Install your own | | | $249 |
| 10 MB | $349 | 30 MB | $570 |
| 20 MB | $485 | 40 MB ST251 | $750 |
| 40 MB full height high speed | | | $695 |

4. Kit for one 3.5" high speed drive with embedded SCSI controller, expansion by daisy chaining additional drives. Uses the least possible space on your desk! Please contact us for specs.

We ship COD ($3) or prepaid, sorry no credit cards!
Add the following amounts for shipping and handling:
memory upgrades and host adapters, 1st unit $5, add. u. $2
hard drive kits without drive $10
h. d. kits with drive need special shock resistant pack. $20
Texas residents add 8% state sales tax.

# Learning Telecommunications Bit by Bit

By Jerry Cross

This month we will look at connecting your modem to your computer. I will center on how to design your modem cable and skip the lessons on actual construction. If you don't already know how to solder, you probably don't have a soldering iron or any of the supplies needed to make one yourself. (This might be a good subject for one of our tech people, huh guys?) If you plan to ask someone to make up a cable, you have to supply information on which pins to connect. This is commonly referred to as the "pinout."

First chore when connecting any type of hardware to your computer is figuring out how to interface it. "Interface" is defined as "the place at which independent systems meet and act on or communicate with each other." Computer manufacturers generally made it easy to connect hardware, such as printers and modems, by supplying a special port. Most computers come equipped with two of these ports. A parallel port is used to connect printers and a serial port for modems and other devices. I will discuss the difference between these ports in future articles, but for our discussion, we will focus on the serial port.

The information about each pin on your serial plug is usually supplied in the owner's manual of your computer or modem. Here is the information for both the ST and 8bit computer ports. Note the ST follows the Standard RS232C format, which is usually found on most modems. When hooking up an 8bit to one of these plugs, use the ST pinouts for your modem.

| ST/RS232C 25 pin | 8-BIT 9-Pin | |
|---|---|---|
| 1-Grd | DTR | |
| 2-Td | CD | (pins not listed |
| 3-Rd | Td | or shown as |
| 4-N/A | Rd | N/A are not |
| 5-Cts | SG | needed with |
| 6-DSR | DSR | modems) |
| 7-SG | RTS | |
| 8-CD | CTS | |
| 9-N/A | N/A | |
| 12-SI | | |
| 20-DTR | | |
| 22-RS | | |

Pretty simple, huh? Just match the pins from the RS232 to your 9-pin plug. Wait a sec! There is no SI pin on the 8bit plug, and where did that Grd pin come from! ACHK!! Now what do you do?

Welcome to the world of the RS232 "standard," folks! What do you do when you are missing certain pins on your computer (or modem)? You end up writing software around this problem or wire up special interfaces. This is why I emphasized buying 100 percent Hayes compatible modems. To better understand this, we have to take a close look at the RS232 Standard.

## In the Beginning...

In 1962, computers were just becoming a fixture in the business world. Manufacturers looked to the future and saw problems developing. Each manufacturer thought its way of interfacing computers was better than the other. The computer industry was stuck figuring which protocol was best. What would happen if the public chose to accept type "A," or for the modem manufacturers, what if they chose to have equipment support type "B?"

This is now happening over the use of 9600 baud. Hayes has one type and U.S. Robotics has another. Another example is the VHS vs Beta video format wars. Lots of Beta users are now stuck with an unsupported system. The Electronic Industry Association developed the RS232 protocol to solve this problem. Each manufacturer follows certain standards, and, in theory, you could take any peripheral and connect it to any computer or even connect two computers together.

Over the years, certain manufacturers decided the EIA standard simply did not meet their needs and strayed from the standard. This makes it difficult connecting your devices unless you understand the different pins.

## The RS232 Protocol

Let's list what each pin is and what it is designed to do. The "standard" RS232 plug usually has 25 pins (called a DB-25 connector). Generally, modems will only use 8 (or less) pins. The others are designed for peripherals such as printers and synchronous transmission devices. These have their own timing circuits and must be "tuned" with the other device. The other pins are needed for the clock timing. This is a bit advanced, but will be covered in later articles. Nearly all modems are asynchronous, meaning the timing information is encoded within the data as it is sent.

| Pin | Label | Description |
|---|---|---|
| 1 | GRD | Protective Ground |
| 2 | TD | Transmit Data |
| 3 | RD | Receive Data |
| 4 | RTS | Request to Send |
| 5 | CTS | Clear to Send |
| 6 | DSR | Data Set Ready |
| 7 | SG | Signal Ground |
| 8 | CD | Carrier Detect |
| 12 | SI | Secondary Carrier Detect |
| 20 | DTR | Data Terminal Ready |
| 22 | RI | Ring Detect |

The Protective Ground is a common electrical ground wire between the modem and computer -- usually the shielding around the cable. By connecting this pin (if your computer supports it), you can eliminate some of the outside interference that can trash your data. Transmit Data is the wire the computer uses to send data to another system.

Receive Data is the wire the computer uses for receiving data from another system. Request to Send is a control signal wire used by the computer to tell the modem it wants to send data. This is used along with the CTS pin. Clear to Send is the control signal wire used by the modem to tell the computer it is ready to receive the data the computer wants to send. This is activated only after receiving a Request to Send (RTS), and stays on until the data is transmitted.

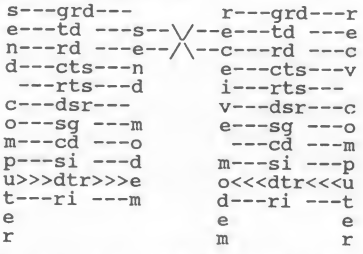
Data Set Ready is the control signal wire used by the

modem to tell the computer the modem is turned on and ready to go. Signal Ground is an electrical ground wire needed to complete the electrical circuit for the data transmit and receive pins. Carrier Detect is a control signal wire used by the modem to tell the computer a communications link is established between itself and another system.

Secondary Carrier Detect is supplemental to the carrier detect used by Hayes compatible modems to signal the computer the modem has detected a high speed carrier (1200 or 2400 baud). Data Terminal Ready is a control signal wire used by the computer to tell the modem it is on and ready to go. Ring Indicator signals the computer an incoming call has been detected.

## Putting it all Together

The best way to describe how these pins operate (and why you need certain pins connected) is to show you how these pins are activated during the progress of making a call. Here is a diagram of what your modem looks like when the power is turned on.

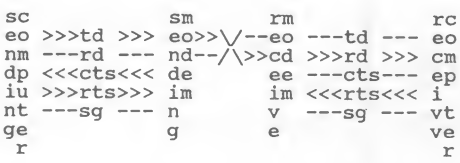


(The < and > characters show that the line has been activated, and the direction from where it was set). Note: There are two lines crossed between the send and receive modem. When you place a call through the phone company, these two lines are reversed. That way, data transmitted by the sending modem will arrive on the receive data pin of the receiving modem.

In it's simplest form, a modem will work with only 3 wires. Information is sent out over the transmit data (TD) and receive data (RD) pins. A ground must be supplied to complete the circuit.

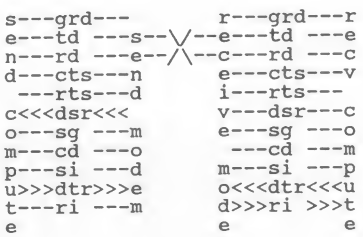
TD >>>> RD RD <<<< TD
GRD -- GRD

Simple, Huh? Well, there's a problem. If the first modem is sending out data and the second computer tried to send data, things go a bit out of whack. The sending modem can only do one thing at a time (send) and will miss the data coming in. It's like talking on the phone; you can't hear the other person if you are talking. When the modem wants to send data, it will activate the request to send (RTS) pin ("I want to send info"). The modem will detect this and respond by turning on the clear to send (CTS) pin ("OK, send your info"). Now, the computer has permission to transmit. The receiving computer, which does not have permission to send, must receive the information before its modem can send.



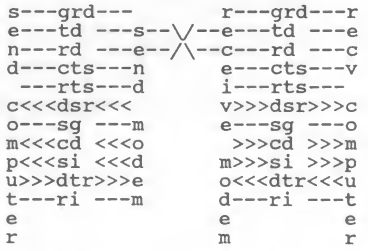
Note since the receive modem has not replied with a CTS, the receiving computer can not send any data. These five wires should be supported by nearly all modems and computers. As long as these are supported, you will be able to communicate with other systems.

So, what do all those other wires do? When you turn on your computer, a signal is sent through the Data Terminal Ready (DTR) pin to tell the modem it is ready to send data. When commanded to, the sending modem will pick up the phone line. When a dial tone is detected, the Data Set Ready pin (DSR) is activated. This tells the computer it is connected to the phone line. This is referred to as "off-hook." The sending modem begins dialing the number. The receiving modem will detect the ringing voltage and signals the Ring Indicator (RI) pin so the computer knows a call is coming in.



At this point, the receive modem has two options. If it is configured to auto-answer, it will pick up the line and attempt to connect with the sending modem. If it is not set to auto-answer, the modem will wait for a command from the computer to answer the phone. This option is dependant on the software you are using. If no carrier is detected within a specific time period, both modems will hang up and go to their original state.

When a connection is made, both modems will begin to search for the correct baud rate and establish a handshake. A "handshake" means the exchange of signals occurring after the modem answers. The link is complete and data can be sent and received. When both modems have correctly connected, the Carrier Detect (CD) pin will be activated to let the computer know a carrier has been detected and a communications link has been established.



Note: If you are transmitting at high speed (1200 or 2400) the ring indicator pin will also be activated. Once a connection has been made, all data will be transmitted over the RD and TD pins. By rapidly "flashing" these pins, the data will be transmitted much like Morse code. Data is sent in the form of binary numbers, (zeros and ones, off and on), which will be deciphered by the computer. I will cover this in future articles.

Ok, now that you understand a little about how the modem communicates with the computer, how can we put this information into practice? Last month, I

mentioned the Signalman Mark XII would not support the DSR pin. As you recall, this pin is activated by the receiving computer when it goes "off-hook" (picks up the phone). For a BBS, this tells the computer someone is on the line. The BBS software I was using constantly checked the status of this pin. If this pin activates, it then checks for a carrier by looking at the CD pin. But, since the modem did not support the DSR pin, the computer thought nobody called.

However, users were calling in OK and got a carrier because the modem was still doing it's job, but the BBS software would not activate. To cure this, I had to run a wire (called a jumper) between the DTR and DSR pins. I could trick the computer into thinking the DSR pin is on all of the time, since the DTR pin is activated while the computer is turn on.

The computer checks the Carrier detect pin and will find it active. It then continues to log on the caller. Another problem comes from the ChicagoLand Atari Club (CLAUG) newsletter. It seems a user was trying to connect his Avatec modem to the ST. He could only get limited use out of it, since he constantly got garbage over the line. It seems that Avatec's "Hayes Compatible" modem was not as compatible as they claimed. Avatec, for some strange reason, decided to have the data control pins located where the DSR/DTR pins are. With no way to control the direction of the data, both modems were in constant conflict. This caused garbled characters, and made it impossible to download programs. His solution was to run a jumper between the RTS and CTS pins on the computer side of the cable, and from the DSR to DTR pins on the modem. I'm not sure how this solved the problem (I don't have an Avatec manual) but it did work. Keep this in mind if you plan to use the Avatec.

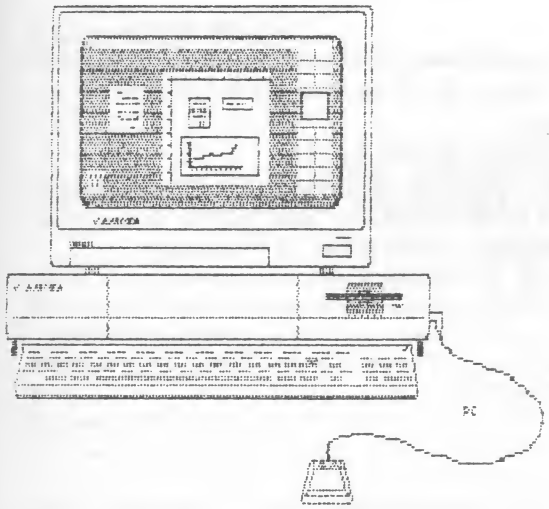
OK, that's all there is to it. To make up your own cable, you will have to look in the modem's manual and locate which pins these command wires are connected to, then compare it to the computer's manual. Give this information to the person making the cable -- it should be easy to solder up one.

For ST users, the job is a bit easier (if you are using a Hayes compatible). Your computer already has a standard DB-25 connector on the back, which matches the plug on the modem. All you should have to do is purchase a simple modem cable. These can be picked up at most computer stores and swap meets for around $10. The Genesee Atari Group made a group purchase of cables for around $6 each recently!

Atari 8bit users have a harder time. The Atari connects to the P:R:Connection (or 850 Interface) plug, which is a DB-9 plug. This is not a standard cable and is rarely carried in computer stores. I recently did some shopping and none of the stores in Flint or Detroit had one in stock, but they said they would make one up for the usual $30 charge (if you could supply the pinout information).

If you don't mind waiting a few days, you can order an excellent cable from ICD Inc. for only $14.95. These are the folks who make the P:R:Connection. It's a good idea to order a modem cable when you order the interface. And while you are at it, order a printer cable too. They are even harder to find!

Next month we finish connecting our modem by showing you how to install your own phone line. It's quite simple, and will save you a bundle of money. See you next month!



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# Mark Williams C or Where Few Have Gone Before

By Richard Staff (GLASS)

Let me save you a lot of time right from the start. Do you really want to get the best C compiler available for the Atari ST? I unequivocally recommend Mark Williams C compiler (version 2 or higher) for users who want to get into the C language. Why do I feel this way? Because MWC provides a well documented and thorough C development environment. It even has full GEM AES/VDI documented support.

Dr. Jack Purdum (developer of the Eco-C88 C Compiler for IBM PC/XT/AT's) says that there are minimum features to look for in a C compiler. Let us see how well Mark Williams C (MWC) matches his list of minimum features.

First, the C compiler should provide for all data types and operators. In simple English, this means the compiler supports the Kernighan and Ritchie (aka, K&R) definition of the C language. A couple of the early C compilers for the Atari ST did not meet this minimum (GST C and Haba C). One of these early C compilers was so limited that I dubbed it the "ha ha C compiler." MWC is a complete ("full") Kernighan and Ritchie C.

Second, the C compiler should have some of the American National Standards Institute's (ANSI) enhancements to the C language. ANSI has spent several years in committee meetings formalizing a definition for the C language that extends the K&R language definition. Although some changes are more important than others, Dr. Purdum feels that you should buy a compiler that has:

* enum and void data types (MWC vers. 2 does)
* structure passing and assignment (MWC does)
* function prototyping (MWC vers. 2 does not)

Dr. Purdum states that these enhancements to C make programming in C easier and more "bullet-proof" (i.e., less prone to mistakes) than a strict K&R compiler. Before ANSI there was UNIX. MWC has many UNIX function calls that are also part of its object libraries.

Third, the C compiler should be able to flag ("catch") syntax and semantic errors during compilation. Syntax errors are violations of the rules of the language itself. For example, leaving a semicolon off of the end of a statement, defining a variable twice, etc. Semantic errors are cases where the syntax is correct, but the context of the code is incorrect. For example, defining a variable as integer type and then later trying to use it as a pointer to an integer (which is wrong). Also, the compiler's error messages should print out in English, not some number you have to look up. MWC meets all!

Fourth, the C compiler should come with a rich collection of library functions. There should be good machine specific function library support in addition to ANSI library support. MWC does provide a full set of AES and VDI function libraries that allows a C programmer to manipulate the graphical environment of an Atari ST computer.

Fifth, the C compiler should provide an integrated development environment that facilitates the edit-compile-test cycle of C program development. Megamax C provides a GEM shell program that accomplishes this, while MWC provides a command line interpreter (CLI) called Microshell (msh) that accomplishes this in a less user-friendly way. I personally prefer a CLI for my C programming. MWC can be told to reload the source into the MicroEMACS (me) editor when an error is encountered during a compile (me will display the error messages in one window, while placing the cursor near the first error in the source in the other window).

Sixth, the C compiler should have "good" documentation. However, rating compiler documentation is a very personal thing. Basically, it should be long enough to cover each aspect of the compiler and how to use it, but be short enough to find things easily. An index and table of contents is a must. MWC version 2 has a reference manual that is 737 pages long, however the first 110 pages (chapters 1 thru 4) provide a tutorial introduction to MWC. The rest of the manual is an alphabetical listing of topics. It does have very well organized table of contents and indexes.

The above six criteria are the basic minimum that a C compiler should mostly meet before being considered for purchase. MWC compares favorably against these basic six. Dr. Jack Purdum suggests there are several additional features that you might want to look for. They are features that you may not use often, but are nice to have.

A C source code debugger (csd) can be indispensable when you have successfully compiled a C program, but can not get it to run the way you want it to. A csd would allow you to execute a program one line at a time (i.e., single-step) and examine values of variables along the way. Thus, a csd can save you hours of debugging time that normally would be spent in finding a small logic error. Mark Williams is coming out with a C source debugger as a separate support product.

A make facility is important to large C development applications. Such applications have many C source modules compiled and linked together to make a final system product. If changes are made to only a handful of the C source modules, issuing the "make" command would only compile those changed modules. This makes program development and maintenance of large systems easier to manage. MWC comes with a "make" program.

[Ed: This is the first in a series of articles dealing with Mark Williams C and Beckemeyer's MT-Cshell environment.]

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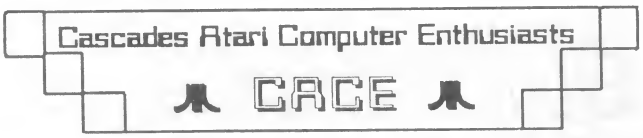


Cascades Atari Computer Enthusiasts (CACE) is the Atari club in and around the Jackson County area. The main purpose of the club is to help inform new users and to promote the use of Atari computers in the community.

| | | |
|---|---|---|
| President | Brent Fisher | 764-4599 |
| Vice-President | Bob Kingsbury | 789-7533 |
| Secretary | Joe Cripps | 782-0199 |
| Treasurer | Scott Boland | 784-9246 |
| Member at Large | Jim Boyce | 522-4074 |
| Editor | Jim Boyce | 522-4074 |

The current membership dues are $10.00 per year, or $14.20 if you wish to subscribe to Michigan Atari Magazine, and are payable at any of the CACE monthly meetings or by mail. Club membership includes access to the entire club software and publication libraries, along with a monthly newsletter. Any written communication with CACE or payments by mail should be sent to: CACE, P.O. Box 6161, Jackson, MI 49204. Our meetings are held on the second Sunday of the month, from 1pm to approx. 4pm. The meetings take place at the Boos Recreation Center, Loomis Park, 210 Gilbert St., Jackson, MI.

### Editorial Blather

Right off the top, I wish to thank Tim Hotchkiss, Ken Huhman and our worthy leader (and president) Brent Fisher for the enormous amount of help they provided in getting out the last newsletter. Thanks, fellas. You will never know how much it meant to me.

Folks, we had in the past a lot of people who contributed to the club in many ways and never received any recognition for their efforts. I discussed this matter with your board, and we agreed that time is long past. Starting in July, we will honor, in the newsletter and at the meeting, a person who gave to the club. A framed certificate will be given to the recipient at the July meeting. We will continue this practice until all people on our list are given the recognition they so richly deserve.

Now, it is time for your editor to feel embarrassed and to rectify his faux pas. Last month I announced two contests. The first contest was set up to get a name for the newsletter, complete with a closing date, rules and list of prizes. The second contest was to design a logo, also, complete with a closing date, rules and a list of prizes -- to my shame, it was asked of me -- logo for what? That is a reasonable question and I hope this is a reasonable answer. A logo for the club. So far, I have one entry -- from Ken Huhman. Come on folks, let's give Ken some competition! It's going to be tough because he has turned in a good entry. Jimmie Boyce

### MAM Update by your roving reporter

Well folks, in checking out the roster of MAM subscribers, it seems we are a bit shy of numbers. For those of you still in the dark about what is going on with the Michigan Atari Magazine (MAM) as far as CACE is concerned, this is the scoop (don't you love that news talk?). The membership voted to become affiliated with MAM once again since it is under new management.

So what do you as a CACE member have to do to get your subscription converted over to MAM? Here is what the board decided and the membership approved. A certain portion of your annual dues is set aside for the newsletter. That portion, plus 35 cents, will get you one month of MAM. So take a look at when your dues expire (check your mailing label), calculate the number of months you have remaining on your membership and multiply it by .35 and that is what you need to get MAM delivered to your door. The books are open for subscriptions and dues from 1PM to 1:30PM on the day of the meeting; if that is not convenient for you, just send it to the CACE post office box address.

### CACE Picnic

pic-nic (pik-nik) n. 1. an informal meal taken in the open air for pleasure. 2.(informal) something very agreeable or easily done. (pic-nicked,pic-nicking) to take part in a picnic. That is the word for today... can you say "picnic"? Good, I like that!

help (help) v. 2. to make it easier for (a person) to do something or for (a thing) to happen. 3.to do something for the benefit of (someone in need). help n. 1.the action of helping or being helped. help out, to give help (especially in a crisis).

That is the main word for the next few months... can you say "help"? Good, I need that! If you might have guessed, there is still plenty of room for people (you) on the picnic committee. Yours truly has assumed the position of chairperson, so all I need is your help on getting the picnic going and getting things together.

What I do need to know from everybody is when would you like to have your picnic; where do you want to have it; but, most importantly, if you'll be going to the picnic. You can call me at home, 787-3970. If I'm not there, leave a message on the tape machine. In the next few months, I'll be asking what you'll be wanting to drink, what passing dish you'll be bringing (so we won't have all pork'n'beans and no potato salad) and so forth.

To keep things legal, the definitions came from the Oxford American Dictionary, copyright 1980. Also if you have any ideas or suggestions, please call! Thanks Tony, from the local Commodore club, for your helpful suggestions and coming to see how us Atarians do things. See ya at the computer fair!

Craig Schaff

### Survey Results

A couple of months ago, I sent out a survey with the newsletter. According to the results, 50 percent of the CACE membership is interested in Word Processing. (Hmmm, I wonder if the lazy one is having some impact?) Next were graphics and games. The second question concerned software demos at the club meetings. Amazingly enough, 50 percent of the members want "no answer" demoed. As soon as I get a copy it will be demoed, until then it will be the second choice, games.

The questions about hardware demos and computer or social projects for the club were met with 90 percent NO ANSWER. However, oddly, the club is willing to help 100 percent with club projects, demos and etc. A large project for those people is articles for the newsletter. The questions about the CACE picnic met with an enthusiastic YES. Oh yes, there was one vote against the picnic. So folks, that is how your board will attempt to serve you in the future.

### Fishing Around

I'd like to start this column by thanking Tom Pritchard for all that he did for the club. He provided us with the meeting place at the Boo's Center, and was the newsletter editor for a bit, along with other contributions he gave to the club. Unfortunately for the club,

Tom's help and expertise is no longer available. Thanks for everything Tom, we appreciated your input and will miss it.

The next meeting will take place on Saturday, May 14, and will be held at the Boo's Center between 1 and approximately 4 pm. Please give me a call if you have any questions. This month we will have a demonstration of a new piece of software, Trailblazer, and we will then raffle it off at the end of the meeting. The raffle will be open to anyone present at the meeting. If you have any software or hardware you would like demonstrated, get in touch with either myself or with Jimmie Boyce.

Brent Fisher


CHAOS is the Capitol Hill Atari Owner's Society, serving the Atari community of the Lansing, Michigan area. The Campus Hill Atari Owner's Society is the Michigan State University chapter of CHAOS. Membership dues are $15.00 per year and entitle members to a 1-year subscription to the Michigan Atari Magazine, a free disk from our regular library and access to our libraries and other resources. Dues may be paid at any CHAOS meeting or by mail. If not using an official membership application, please include your name, address, phone and a list of your equipment and interests.

Sysop John Nagy and CHAOS invite you to call one of the country's finest BBSes at 517-371-1106, 300/1200/2400 baud, 24 hours a day (Atascii/Ascii) serving both 8 and 16 bit Atari computers. Send inquiries regarding CHAOS, mail orders, memberships, to: CHAOS, PO Box 16132, Lansing, MI 48901.

The meetings take place at the MSU Physics- Astronomy Building, Physics Road, Room 118. Meetings begin at 10 a.m. sharp and last until 1 p.m.. Members and guests are welcome to any SIG meeting that interests them. To get to a meeting, take East Grand River to the Collingwood Entrance for MSU. The first available left turn is Physics Rd. The Physics--Astronomy Building is about 1 block from the corner, on the right side. Park in the gated lot just past the building.

Illegal copying, or any violation of coyright laws is not condoned or allowed at any CHAOS-sponsored function, including the club BBS.

Elected and appointed Officers of CHAOS

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| ST SIG Coord | Mike Fildee | |
| BBS Sysop | John Nagy | 487-5646 |

### Meeting Minutes

ST: The meeting began with the usual free-for-all discussion which focused heavily on the 'virus' situation. Chet Kapusinski demoed the program Gone Fishin' which is a fishing simulation game donated from Interstel, Corp. After the demo, the software was raffled off as a door prize. Next, two handouts were passed out. One was a ten-page listing of interesting and varied BBSes; the other was a cross-reference listing of ST articles in MAM. Doug Bell then did an excellent job of demoing the disk-of-the-month, which was assembled by Sally Nagy.

After the break, a video tape was shown featuring an interview with Bill Kelly of Computer Concepts, a relatively new software rental store. This was followed by commercial program demoes from Sally Nagy. Sally demoed Leatherneck, a war simulation, Treasure Hunt, an adventure game and she also demoed a maze-type game. Finally, Cuong Duong demoed Dark Castle, a graphics adventure/arcade game. Whew!

8bit: At the April CHAOS meeting, John Nagy started things off with demos of two commercial programs, Programmers Pal, an utility package, and MTOS, a multi-tasking operating system for 8bit Ataris. He also showed SuperDOS, a semi-commercial Austrailian product.

Then, two handouts were passed out. One was an interesting ten-page listing of various BBSes, and the other was a cross-reference listing of MAM ST articles. Next, John Nagy demoed another fine disk-of-the-month, which included a PD version of PrintShop. Finally, I demoed Jupiter:1999, a graphic adventure game which was loaned to us from Computer Concepts.

That's it for APRIL. Don't miss us in MAY! Remember, we may declare a Surprize Dividend meeting at any time, with FREE library disks for members in attendance!

Guy Hurt

### President's Corner

Things are looking rosy for CHAOS right now. On the other hand, Atari Corporation is coming under increasing criticism. You can read the comments in the major Atari magazines and newsletters. As for CHAOS...our rental program is going great guns. The response, for the 8bit library especially, has been overwhelming. We are receiving orders from places as far away as the Phillipines. Special thanks to all of the librarians for their extra efforts.

A big welcome to Mike Fildee who has agreed to help out as ST SIG Coordinator. Doug Bell will be giving him a hand. They both need you ST owners to let them know what you have to demonstrate, or what you would like to see. Pitch in, and make it better for everyone. Thanks to all of you who loaned equipment or donated time for the MAXIT show last month. I hope all of you enjoyed it as much as I did.

In other news, at this writing I have received two issues of Analog. Glad to see them back. I also received a copy of the "new" Compute! Don't know where the subscription came from since I let mine lapse two years ago. Oh well, anything for free!

Leo Sell


The Genesee Atari Group is a non-profit group of Atari Owners in and around Flint, Michigan. Our purpose is to provide assistance to users of Atari personal computers. This organization is not affiliated with Atari, Inc. GAG meets on the second Wednesday of the month at Neithercut School, located at 2818 Crestbrook Drive (Near Atherton and Hammerburg ro.). During the school year we also have a 4th Saturday workshop at 9:30 a.m. Membership is $15 and includes a subscription to the Michigan Atari Magzine.

Meeting dates
May11 General meeting
June 8 General meeting
NO Saturday Session for May!
Information: Jerry Cross 313-736-4544
FACTS BBS 313-736-3920

**President's Report**

Not much to report this month. We finally received our subscriptions to Analog. It seems they lost the check I sent months ago, but things are back on track now.

Note that the May Saturday session is canceled because of the holidays. We are unable to get the school for that weekend.

GAG attended a couple of swap meets in April. Although we did not make a whole lot of money, we did get it across to those dealers that Atari is not dead, and we want some representation at these meets. If you would like to assist in manning a booth, contact Jerry Cross. It is not fair for the same people to give up their Sundays to watch over these booths, and I feel it's important for at least a token showing by the area clubs.

That's it; see you at the meeting.

Jerry Cross

GKAUG GREATER KALAMAZOO ATARI USERS GROUP

GKAUG meets the second Saturday of each month at 11:00 am in the Dewing Hall on the Kalamazoo College Campus, Corner of Academy & Monroe. Dues are $20/yr..

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|---|---|---|
| President | Frank Fellheimer | 657-6106 |
| Vice President | Dan Youngs | |
| Treasurer | DaveBryant | |
| Librarian | Steven Buechler | |
| Archiver | Dave Oldenburg | |
| STChairman | Jim Zinke | |
| SysOp | Alex Stevens | |
| GKAUG BBS: | (616)657-2665 | |

Through our 4th meeting of the year, and we managed to select a date for the GKAUG picnic and programming party. Looks to be Saturday, July 9th, beginning at 10 a.m. and lasting until "the Fat Lady" sings. More will be posted as we approach the date. I am sure you will want to bring something along to eat and perhaps a friend or two.

Alex made it back from his trip to Mexico with a couple of T-shirts and a little sun tan. He will be working on the BBS to straighten out the problems I introduced while he was away.

We had a demo of Lode Runner/Championship Loderunner and the Analog program from Issue #56 BBKART and the companion program to print out your pictures KOALAPRINT. They can be really nice if you want to print some pictures with text on them in various sizes and fonts.

We had an ST in this time. I like to see other members participate like this. Dave Bryant gave us a breakdown on the number of ST users (some 30) and the number that replied to our questionnaire (some 7). If the ST users want some "action," they have to get together. The club meeting is only a stepping stone to other meetings, so...you make the choice. Our 8bit users always seem to get something out of these meetings.

Next scheduled meeting is the Saturday, 14 May 1988 starting at 11:00am. We have Analog #59 now and will have the BBKART and KoalaPrint on our monthly disk if all goes well. We have a month to our next meeting so if you have any questions, we should be able to get them answered by then. Also, I purchased "The Newsroom" from Springboard. I will bring it for a demo. I really like it, and I can't even run it on my 1200XL because I don't have built in BASIC.

The extra drives should be available soon. I talked to Fred Farleigh and he has volunteered his time to getting the power supply together for the drives. He has gone to Amiga but he will still support the eightbitters. Thank You, Fred.

We didn't have time to get into the Adventure Creator maps, but we will try next time. No regular meetings are scheduled for July and August... The picnic in July will replace that regular meeting.

We will be providing a membership list for those people who request one (members only), and if you do not want your address or phone to be available for other members, please let Dave Bryant know (349-6063). We have found many of our members live close to each other and could access each other if they knew their numbers and addresses.

Frank Fellheimer

Great Lakes Atari ST Support 'GLASS' — MICHIGAN'S Oldest 'ST' only Users Group I ♡ my ST!

General meeting: First Thursday (every month) 6 p.m. until 9:00. Meeting at: Athens High School, Troy, MI., Room 1506, 4333 John R, 1/10 mile north of Wattles (17 Mile Rd.)

Meeting topic for June....The Picture Show! All about graphic pictures and programs. How to change picture file formats and resolutions (to and from NeoChrome, Degas, EasyDraw, and pictures from other computers). Different slide-show programs. Different graphic drawing programs.

**From the Desk of the President**

My Favorite Software is...Okay aSTarians, I put a small challenge to you. Due to not being able to think of anything original to write this month I'm going to ask you to write something for me. Would you consider writing a paragraph or more, in your own words, what your favorite piece of software is and why? This could be about a game, word-processor, database, telecommunications, or shucks, most anything. You will not be graded (or de-graded), judged, or even rewarded but it would be interesting to see what some of the favorites are. You don't even have to sign your name. Please do include the name of the distributor and retail price. Don't worry about being professional. It really doesn't take much time and can be kind of fun. Also, it is fine if several people write about the same program. The following is my contribution.

My Favorite Software is Dungeon Master from FTL, makers of SunDog and other great games. I like DM because the graphics are great, the sounds are entertaining, and the game is very easy to play. Unlike text adventures. where you have to remember just what words to use (and how to use them) DM only needs you to point and click in the game action.

That's not to say that it is easy to solve though. It's been very addictive because it is so challenging. There is a lot of puzzle solving (of many different types) to be done to advance in the game. Being able to save and return at a later time keeps me from having to start over every time. And when I'm playing I don't want to stop because it's so enjoyable! I guess I have over 100 hours of playtime logged so far and still want to keep playing (even rather than writing this) late into the night. This is fantasy at its best. I even swap ideas and notes with other owners and players when I get stumped.

DM retails for $39.95 but can usually be found discounted for less. It's rumored that further adventures are planned using the characters that survive the dungeon. If this is true you can be sure I will also buy them.

There, that wasn't so hard. In fact it was kind of fun. Anyway, on with this article. Bob Garcia, we missed you last Thursday. But more importantly, you missed getting Universal File Selector for FREE! Yup, your name was drawn but you weren't here to claim. We still have software surprises up our sleeve for giveaways. Remember, our June meeting will feature telecommunications with Mike Gillie.

We are interested in receiving feedback, questions, or just mail in general. How do you like the 'in-house' Newsletter? Do you have any questions or problems with your hardware or software? Can you share any tips or tricks on using the Atari ST with us? Do you find the meetings interesting, educational, or fun? Please feel free to write letters to the editor (address below) and help him keep from feeling alone, poor guy!

We are adding a PASCAL Sig meeting night. If you are programming in Pascal and care to meet with others who are, then come to our regular meeting location (see above) on the 4th Thursday of the month and share your poblems, solutions and ideas with them. If you have any questions about it check in with the Cosmic STomper (BBS) at 313-547-0440, 300/1200/2400 baud in Royal Oak and leave a message to the Sysop or Byron Johnson.

See you next month!!!

Steve Mileski, president

Write to: G.L.A.S.S. (Great Lakes Atari ST Support)
P.O. Box 99737, Troy, Mich. 48099

GRASS
GRAND RAPIDS ATARI SYSTEMS SUPPORTERS

Meeting: May 4, Wyoming Public Library, 3350 Michael SW., 6:30 p.m.

| | | |
|---|---|---|
| George Nosky | President/Treasurer | (616)942-1527 |
| 2240 Parkridge Dr. SE. Grand Rapids, 49506. | | |
| Gary Heitz | Vice President | (616)676-0112 |
| Marvin Waid | Secretary | (616)866-1998 |
| Chuck Baughman | Librarian | (616)795-7373 |
| Gerry Borysiak | Director | (616)896-9358 |
| Steve Gilbert | Director | (616)891-1785 |
| Marek Kulikowiec | Director | (616)957-2646 |
| Tim Feenstra | Member. Chairman | (616)784-6230 |

**President's Comments**

I want to take this opportunity to thank Chuck Baughman for filling in for me at the April meeting. We took advantage of our daughter's Spring Break and went on vacation. Thanks Chuck, I appreciate your efforts.

Charlene Bird, from Middleville, joined us at the April meeting. Welcome!

Chuck tells me that the News Station raffle was a big success. Congratulations go to Gerry Borysiak since he held the winning ticket. I bet Gerry puts it to good use making some fancy flyers for our Atari Fair. Looks like we will have more raffles in the future. If you have some suggestions for a raffle, please contact one of your officers or directors. Let's keep the price under $40.

The Atari Fair is firm for Saturday, May 14th at the Wyoming Public Library (address above). Time is from 10 a.m. to 3 p.m. You should be reading this a few days before the Fair, so this is only a reminder. Gerry Borysiak and his committee have a fantastic day planned. Make sure you come out and support your club. Bring your friends!

Special invitation to fellow Atari enthusiasts in other user groups: Come out and see us. We would like to meet you! The following are some of the displays, demonstrations and attractions we will have for you: ST computer display, music demos, PrintShop/News Station demos, word processing/spreadsheet demos, education and communications displays, as well as the new XE game/computer system.

Public domain software will be on sale, and there will be refreshments and raffles throughout the day. See you there!

We have had a difficult time finding a meeting place to hold Steve Gilbert's BASIC seminar. As a result, we have decided to delay it until Fall.

I listed June 1st as the next meeting date. As you know, we will vote at the May meeting to determine if we will meet during the summer months. If you missed the May meeting, call up Steve Gilbert's BBS (616) 891-8740 to see how the members voted.

See you on May 14th at the Atari Fair.

George Nosky

## M.A.C.E. Journal

| 1988 General Meeting |
|---|
| May 17 |
| June 21 |
| July 19 |
| Aug. 16 |
| Sept. 20 |
| Oct. 18 |
| Nov. 15 |
| Dec. 20 |

All General meetings are held in Rm. 115 of the Southfield Civic Center at 10 1/2 Mile Rd and Evergreen. Meetings begin at 7:30 p.m. MACE can be contacted at P.O. Box 2785, Southfield, MI 48037. Dues are $20 per family per year.

Michigan Atari Computer Enthusiast members receive the Michigan Atari Magazine, a monthly magazine keeping them informed of what is new in MACE and the whole Atari community. Members are also entitled to purchase disks from the 8bit and ST public domain software libraries. These libraries are always growing and expanding, with the 8bit library at more than 400 disks and the ST near 200! Eight bit disks are $4 and ST disks are $5 each.

The most important benefit you receive is the help and support from (and interaction with) other Atari owners. If you're

having a problem, need advice about a software package or whatever, your fellow MACE members can and will help. That's what a user group is all about -- helping each other get the most from our computing.

The ST sig meets currently on the first Tuesday of the month and there is a small admission charge to defray room rental costs. If you contribute an article which is published in MAM, you are entitled to a free disk from one of the club's libraries.

| | | |
|---|---|---|
| President | Don Neff | (313)838-0077 |
| Vice President | Jim Kennedy | (313)478-5531 |
| Corresponding Sec'tary | Ted Newkumet | (313)835-4643 |
| Recording Secretary | Mike Olin | (313)420-3301 |
| Treasurer | Heather Neff | (313)838-0077 |
| Journal Editor | Pattie Rayl | (313)973-8825 |
| 8bit Librarian | Kip Keifer | (313)288-1243 |
| 16bit Librarian | Paul Wheeler | (313)538-3649 |
| Membership Chairman | Bill Rayl | (313)973-8825 |

| MACE Board Numbers | SysOps |
|---|---|
| MACE WeST (313) 582-0657 (3/12/24) | Sharie Middlebrook |
| MACE East (313)978-8087 (3/12) | Mike Lechkun |
| College Board (313)478-9647 (3/12) | Jim Kennedy |
| Molin's Den (313)420-0407 (3/12) | Mike Olin |
| Treasure CheST (313)973-9137 (3/12/24) | Bill & Pattie Rayl |

## March Minutes

The March meeting of the Michigan Atari Computer Enthusiasts was held on Tuesday, March 22, at the Southfield Civic Center. President Don Neff called the meeting to order at 7:45 pm by announcing the feature topic: Printer Graphics. Don also announced the April topic will be Home Productivity.

Don noted many members indicated an interest in receiving copies of MAM in the mail as opposed to waiting for the meeting night. Following a brief discussion, it was decided that the April issue will be mailed, and members will vote at the April meeting to decide if this procedure is to become permanent.

Heather Neff announced a "New MACE Logo" contest. The contest is open to any member; there is no limit to the number of submissions per member. Officers may submit entries but will not be eligible to win prizes as they will be judging. The name of the member should not appear anywhere in the artwork, nor should it be placed on the back. The finished artwork must clearly incorporate the full name of the club, but may play on the "MACE" abbreviation. Submitted entries should be no smaller than 3x5", no larger than 8x10" and must be done with black ink (only) on a white background (only). Artwork may be either free hand or computer generated graphics, but *must* be original. Submissions will be accepted via the club mailbox or may be presented to any officer before May 31, 1988.

The prize for the winning entry will be software and/or hardware to be valued at approximately $50, so it is important that the member include his/her preference (8bit or ST) on the back of the entry along with the valid membership number.

Don announced members who submit articles for publication in MAM will receive a coupon for a disk from either disk library. Suggested topics include software reviews (both pro and con), tricks and tips, game hints, etc. Articles may be submitted via modem to MACE WeST (582-0657) or directly to any officer at a meeting.

Ed Hanson, ST SIG Chairman, demonstrated some of the graphic features available on the ST using current versions of Degas and Neochrome and also displayed some pictures that had been dumped to a color printer.

Michael Clayton demonstrated his YEMACYB color printing program for the 8bit computers, then donated a copy to the club for raffle.

Member Paul Wheeler was presented with a MACE Certificate of Appreciation for his many years of distinguished service to the club. Paul has performed the duties of Membership Chairman for several years, and is now the ST Disk Librarian.

After a brief intermission, the 8bit SIG was treated to a tutorial on use of the Print Shop Labels program by Irene Church, and Don Neff then demonstrated the Print Shop Icon Shop and various other utilities available in the 8bit library.

The ST SIG reviewed the improved graphic capabilities of Spectrum 512.

## April Minutes

The April meeting of the Michigan Atari Computer Enthusiasts was held on Tuesday, April 19, at the Southfield Civic Center. President Don Neff called the meeting to order at 7:30 pm, sadly announcing that member George Trittschler had died of a heart attack in early April. George, more commonly known to many as George Andrew, was actively involved as Sysop of the 8bit Sigs on MACE WeST and his absence has been a shock to many.

Don introduced Greg Kranich, one of the Sysops of the Atari Base BBSes in Sunnyvale. Greg noted that he is originally from Michigan, having moved to California about 7 years ago, and was home for a class reunion. Greg fielded questions from the audience about the happenings in Sunnyvale, trying very hard not to release unofficial comments about future software/hardware systems to the relief of many who are tired of vaporware. Many thanks to Greg for visiting!

The feature topic of the meeting was Home Productivity and there were demonstrations of spread sheets and databases. Paul Wheeler demonstrated an Analog program called "MicroCheck" by Clayton Walnum, a BASIC program for the 8bit machines. Bob Retelle demonstrated a program called "Portfolio Manager," which he ported to the Atari from a program that was originally written for "that other computer."

The MACE Appreciation Award was presented to member Bill Kane for his efforts to help with the menial and mundane tasks of operating the club. Bill has contributed a great deal of time to setting up the room and distributing the Journals.

Don again requested that members contribute articles for printing in the Journal.

In the 8bit SIG meeting, Don demonstrated a variety of programs from the club library fitting to the Home Productivity topic. Cassette and disk label makers, loan analyzers, weather prediction systems, trip calculators and project planners were among the fare.

The ST SIG meeting flopped because persons who brought hardware neglected to bring the connecting cables. Shame be upon you for 40 days and 40 nights!
The next meeting will be held on Tuesday, May 17, when we will be celebrating another MACE Birthday meeting.

There will be special guest speakers along with door prizes and goodies to stuff in our faces. The second half of the meeting will be a Swap Meet. Members may bring their used hardware and software to sell, barter or trade. You must be a member in good standing to acquire table space.

Michael Olin

**From the MACE President**

*Headache #69, Part II*

Deja Vu: Just before the March meeting, a couple of people who were scheduled to do presentations said they could not make it to the meeting. They promised to give their demos at a future meeting though.

*Headache #69, Part III*

Several people standing at the back of the room spent the evening talking loudly to one another. Talking so loudly in fact, they drowned out the voices of the speakers who were using microphones! Some members of the audience went home early in disgust because they couldn't hear the excellent presentations. If you come to the MACE meeting to socialize, please go into the lobby to do it. There are many areas in the building for you to go if you want to talk with your friends. There is only one area where we can hold our meeting and give our presentations - the same room you've been so rudely talking in. You talkers can move, we can't. If you are one of the talkers, please use the lobby instead. If you are one of the audience members who is being disturbed by the talkers, tell THEM, not me.

*Analog Magazine*

ST-Log and Analog showed up in my mailbox again. It's nice to have them back, but I don't care for the glossy paper they are printed on now. That paper may be great for Larry's other magazines which have a heavy photo content, but it's hard to read text on it; the light reflects off the pages. Actually, I'd be glad to have Analog on any paper, just as long as I receive it. By the way, does the "LFP" at the bottom of the table of contents page stand for "Larry's Fine Photos"?

Lee Pappas of Analog said they will extend our subscriptions by three months to make up for the past inconvenience to us. That's fine fellows, but what about the 1987 summer issues we paid for but never received from you? Why don't you extend our subscriptions enough to replace them?

Remember Analog's previous excuse of nondelivery because they were having problems with the printer? (He wanted to be paid for his services perhaps?) Analog has replaced that with a new excuse. Lee told me the subscription service they had hired screwed up the delivery of those issues so it's not Analog's fault. Uh, Lee, you hired them, we didn't. Why didn't Michael Des Chenes fire them when they screwed up the first delivery? (Or the second, or the third, or...)

Why should we innocent subscribers pay for Mike's weak business management practices? I still recommend subscribers don't renew their Analog subscriptions until they receive everything they paid for in 1987.

*Special Members*

I had the pleasure of presenting a "MACE Appreciation Award" at the March meeting. These awards are for members who have quietly but continually put in a lot of work to keep our club going, usually without any thanks from anyone. April's award was given to Paul Wheeler, the ST SIG Librarian, for his many years of service to MACE. Paul has been involved in almost every club activity for many years and has also been a club officer for most of those years. In fact, I think Paul has been an officer longer than any other member of MACE. Thanks from all of us Paul.

Paul said he has already received several other awards from MACE. I forgot to mention it Paul, but this award is special because it includes an expense-paid weekend trip for one to beautiful Zug Island. The AAA Travel Bureau has mapped the scenic route through Delray for you.

*Meeting Themes*

Our March meeting was Printer Graphics night. Mike taught us how to make color prints on any Epson printer. Irene showed us how to make graphic labels with Print shop icons and different fonts. George gave a thorough demostration of DiskIO Plus. We demonstrated a few of the Graphics and Print Shop utilities from the MACE library and concluded with a "tonight only" sale on all the Print Shop and Graphics utility disks.

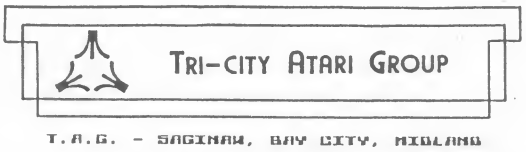
April's meeting will cover Home Productivity programs such as: disk labels, mailing labels, mortgage amortization and easy data bases. We'll be having a another "tonight only" sale on several special disks including a nice data base program.

May, of course, is the MACE Birthday party (it's our 8th birthday!). The theme will be food, fun and socializing. Also, due to your many request, we'll be holding a computer swap that night too. Bring your extra computer equipment and take home some cash. Better still, bring your extra cash and take home my computer equipment.

June's theme will be Word Processing and will feature demos of the more popular word processors and spelling checkers. The special MACE library "tonight only" sale will include a word processor with a spell checker!

As always, your questions about any Atari subject will be welcomed at any meeting even if the question doesn't pertain to that night's theme. MACE wants to help you make your Atari more useful and enjoyable for you. May the DOS be with you.

Don Neff




The Tri-City Atari Users Group meets the second Saturday of every month at 2:00 pm at the Rudy Zauel Memorial Library on the corner of Shattuck and Center in Saginaw. Upcoming meetings are scheduled as follows: May 14, June 11,1988.

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|---|---|---|
| LeRoy Valley | President | 686-6796 |
| Marty Schmidt | Treasurer/Sec. | 792-6029 |
| Al Jennings | 8bit Disk lib. | 790-1980 |
| Neil Demo | ST Disk Lib. | |

Club dues are $20.00 per year. For this fee you get the Michigan Atari Magazine, support for both the 8bit and the ST and access to the club's public domain library. We currently have about 140 disks in the 8bit library and 40 in the ST library. You can get copies of these disks *at no charge* if you bring your own disk to copy on at the meeting. If you don't have a disk, you can get 8bit disks for $1.00 and ST disks for $2.00 each. Non-TAG members can get copies of the 8bit disks for $2.00 each and the ST disks for $4.00 each. If you need to renew, do it now!

### Hot Flashes from the Future!

The month is May; spring is arriving, and everything is in bloom. To commemorate all of this beauty, TAG is having a meeting dedicated to beauty and imagination. This month, we'll be featuring programs designed to unleash your artistic side.

On the ST side, Al Jennings will be demoing Spectrum 512, a paint program that allows you to use 512 colors simultaneously! And going one step beyond that, Neil Demo (perfect last name!) will demo the latest in paint programs, Quantum Paint, a program that features the ability to display 4096 colors at once!

Not to be outdone, the eightbitters are demoing several of their own paint programs. Ted Beauchamp will be demoing BBK Artist, an art program from our public domain library, and Nelson Greene will be showing Rembrandt, an impressive program from Antic! There will be raffles for the 8bits, so show up and try to win!

### Relics to Relish

The meeting started with a discussion of how to get some of the ex-members back into the fold. Char Davis proposed we send out a survey to all ex-members to find out why they stopped coming, and what would bring them back. It was agreed this was a good idea, so Char is now preparing the survey, and will take care of tabulating the results.

TAG recently purchased 6 programs and 2 books for the 8bits and these items will be shown and raffled during the coming months. Be on hand to see what they are and try to win them! It was also agreed LeRoy Valley would place an ad in the paper to attract new members.

Moving into the demo's, LeRoy Valley demoed Label Master Elite for the ST. This slick little program incorporates a simple database to handle names and addresses (and you can sort on any field) and has the ability to add Print Master icons to any of the labels! It also prints disk labels, but there appears to be a bug in the program for this feature. If you print a disk label that uses a PM design, the program only prints 4" form length. Selecting 2" or 3" does not change the form length! Overall though, the program does do a nice job, and you can even vary the size of lettering for each line! Not a bad program for $27.00.

LeRoy also showed off several programs he has written. The first was a player program for Digisound ST files. The program is available in both .PRG and .ACC versions, and utilizes a GEM file selector box for selecting the file you want to play. The other program was a desktop accessory to set up a myriad of features for the Star NX-1000 Rainbow printer. The accessory allows you to select any font, any pitch, and 7 of the printers colors. It also lets you do form feeds, set tabs, set margins, and skip perforations! LeRoy also had his new printer there. If you want to know more about this new color printer, read the review in ST Notes.

On the 8bit side, Char Davis demoed Super Dos, a new DOS with a lot of nice features. Besides being the smallest (memory wise) DOS around, it appears to be the most feature-packed. It's got all of the standard features of Atari DOS, plus it handles true double density drives, lets you create menus to automatically run Basic and Binary files and a whole host of other features. We'll be raffling this program off at the May meeting so show up!

After the demo, the eightbitters held their own meeting and agreed to try something new. Char is now heading up the new project to design and build an adventure game. Next meeting will feature the designing of the basic scenario for the game, and each member of the group will be in charge of some facet of the game -- whether it's creating a story line or programming, join this group and you'll have fun!

The meeting ended with everybody oooing and ahing over the NX-1000 Rainbow printer. Quite often I heard the question "Is this a 24-pin printer?"

### The President Speaks Out

This month's attendance was improved, and the crowd seemed more enthusiastic than usual. Must be something in the air this time of year! Looking at the list of officers, you'll find a new name under ST disk librarian. We have had our share of problems finding someone with the time and energy to devote to this job. and I can only wish Neil good luck!

Elections are coming up next month, so if you want to run for one of the offices, be prepared to volunteer (or to be nominated). I would like to add the office of 8bit Organizer to our club. This person would be responsible for organizing the 8bit portion of the meeting, and also for supplying me with the 8bit meeting minutes. Think about it, and I'll see you all the next meeting!

LeRoy Valley

**8bit Equipment Volunteers**

| | |
|---|---|
| Nelson Greene | Disk Drive, Monitor, Computer |

**ST Equipment Volunteers**

| | |
|---|---|
| Neil Demo | 520ST & disk drive |
| Bryant Lafreniere | Monitor |

Once again, a big Thanks to all of you who loan your equipment to the club. *Please,* if you're going to be late, or can't make it, *call!!* It's not fair to the rest of the people when there's no monitor, or drive for the system!


**How to Join WAUG!**

Come to a meeting! WAUG meets on the second Tuesday of each month from 7 to 10 p.m. State Street Computer in Ann Arbor will host the next meeting. State Street Computer is located at 334 S. State Street, between N. University and E. Williams Streets, near the Nickels Arcade. There is an exit for State St. off of I-94, or take US-23 to Washtenaw, then Washtenaw to N. University. Please bring a chair or two.

If you wish to join WAUG! by mail, please send a check or money order for $15 made out to Bob Carlini to: 15420 Maxwell. Plymouth, MI, 48170.

Members receive the Michigan Atari Magazine, and also have access to the 8bit and ST disk libraries. These disks are jam-packed with useful and entertaining public domain software. Members pay the special price of $2 for 8bit and $3 for ST disks, and disks may be purchased in person or by mail.

| | | |
|---|---|---|
| President | Mike Olin | (313)420-3301 |
| Vice President | Pattie Snyder-Rayl | (313)973-8825 |
| Treasurer | Bob Carlini | (313)261-7609 |
| Secretary | Craig Harvey | (313)996-0940 |
| Newslett'r Ed'r | Bill Rayl | (313)973-8825 |
| 8bit Librarian | Mike Pieronek | (313)482-4108 |
| ST Librarian | Bruce Urbanski | (313)451-0483 |

**General Meeting 4/12/88**

Music & MIDI were the topics for this meeting, and we were treated to a wonderful display of some of the things one can do with an Atari, MIDI (Musical Instrument Digital Interface) and a synthesizer. Rick Schrader first showed a program called Virtuoso for the 8bit, which provides a way to display shapes and colors on your screen combined with music. Then using his 8bit MIDI interface connected up to a synthesizer, he demoed a few songs converted from AMS to MIDI, which allowed them to be spruced up quite a bit.

For the ST, Rick showed a sequencer (hope I got the terms right) called Midisoft, which retails for around $99. This allows things like recording new tracks on top of old ones while listening to the old ones. Using Music Studio, Rick also showed a little about how you can create your own instrument with these programs. This was carried further by Brian Hall who demoed a public domain 'patch generator' that you can use to randomly alter various parameters to create instruments previously unknown to mankind. Just let it go, and then throw out the sounds that don't appeal to you! Brian also pointed out that the MIDI ports on the ST don't have to be used for music -- they work fine as high speed ports for other uses, as in the game MIDI Maze.

Apparently, the ST is being heavily advertised in electronic music magazines, and there is a good bit of PD software being generated for this use of the machine.

**Business**

The membership voted to add July and August to the club schedule and to increase dues to $15 per year to cover additional magazine costs and keep the club solvent. This means that all $10 memberships scheduled to expire after June '88 will now expire two months earlier, so watch your MAM mailing label closely for notice of your expiration date.

Also, since a few members are not receiving their MAM's before the meeting, you now may elect to pick up your MAM at the meeting rather than having it mailed. However, you can't switch back and forth each month, and if you say not to mail it and you don't show up at the meeting, it will not be mailed at all due to the much higher cost of first class compared to bulk mail.

Starting with the May meeting, WAUG's meeting location will be at State Street Computer, at 334 S. State Street, Ann Arbor. This is located on the west side of State St., just south of Nickel's Arcade and North University St., and north of William St. The topic of the May meeting will be 'Hack & Slash' which will include such things as use of a sector editor and possibly some hardware modifications.

Craig Harvey

**From The Prez...**

I would like to give special thanks to Rick Schrader and Brian Hall for their work above and beyond the call of duty at the April Music Meeting. You guys make it look so easy, and I don't think I've ever heard such sounds before! I think most of the persons in attendance will agree that it was not only entertaining but also quite informative, and I enjoyed your enthusiasm.

The May meeting is going to be a "catch-all" night. I expect there will be a little something for everybody when we "Hack & Slash" our way through our Ataris. Newcomers to the computer world should find a lot of good information being bandied about, and the intermediate and expert users should also be able to pick up a trick or two while we discuss sector editors, hardware upgrades and the like.

I was pleased to see the amount of interest in holding year 'round meetings! I was expecting the general consensus would go along with the suggestion, but did not expect such an overwhelming positive vote. There are a lot of great suggestions for meeting topics which will be a big help to the new officers when their time comes, and it's good that the suggestions came from the members themselves. I think it is absolutely vital to the future of this club that the members stay involved in the planning processes.

That, of course, leads up to one last pitch about running for elected office. In the June meeting, we will be holding elections and I implore each of you to think about the possible contribution you could make toward keeping this club strong. The duties are not terribly difficult and 12 months is not an eternity. Copies of the Charter will be made available at the May meeting, where you can find the job descriptions for each office.

Michael Olin

P.S. If you want to hear more of Brian's MIDI capability, stop in at SchoolKids Records in Ann Arbor and pick up a copy of Shock Therapy's new album, "My Unshakable Belief."

# Atari Announces Another Computer

## Courtesy of the Los Angeles ACE, April Issue

[Editors' Note: This article will soothe all the aches you may have gotten in the struggle to do this year's tax forms!]

Atari Corp., Sunnyvale, CA, has announced another computer in their successful line of ST computers. This computer, model 1040EZ, dubbed the Collector, has several added features not found on any other computer.

The case design is a cross between Atari's popular 1040ST and the new Mega released in December, 1987. The base unit looks identical to the Mega unit except the keyboard is attached at a 60 degree angle from the rear corner of the unit. This feature was added to provide easier access to the mouse port.

The 1040EZ was said to be designed for those individuals that make less than $15,000 a year and have no major investments.

Major changes from the previous STs:

- Reduced Costs: The new cost structure has been reduced and the cost tables have been simplified.
- New rules for children: The 1040EZ will not allow games to be run if there are no children in your household.
- Age 65 or over or blind: The use of an interface A is required if the user is over theage of 65 or blind.
- Social Security Number: The 1040EZ now requires children to enter their social security number before using the computer.

Several options will be available for the 1040EZ soon. Here is a list:

- Manual B--fully explains use of User's Manual
- Option A--needed to use any other option
- Option C--Used if computer is used in a business
- Option D--Needed if you have lots of money (Atari wants some of it)
- Option 2210--used if you didn't pay enough for your other computer
- Option 3903--if you are going to move your computer
- Option 4684--if you injure yourself with your computer.

There are several manuals available from Atari. The following publications can be ordered from Atari, or you can read or photocopy them at many participating libraries.

- Manual 17: Your Atari Computer
- Manual 54: Computer guide for US citizens and resident aliens abroad
- Manual 334: Computer guide for Small Business
- Manual 503: Child and Dependent Computer Guide
- Manual 523: Selling your house for a computer
- Manual 529: Sending us more money
- Manual 910: User Group listings
- Manual 929: Computer Rules for children and dependents

And many more....

Several sources have reviewed the new 1040EZ and all the documents available and have several different opinions.

LA Times: It's the best thing since sliced bread, but I don't like the 1040EZ with butter and milk.

Micro Times: After long hours and sore eyes, we have come to the opinion that we need to spend more time and effort to produce a better mouse trap and have no business eating prunes.

Byte: After using the 1040EZ for several years, we have come to the conclusion that we have not vet seen this computer.

Professor Wobblybottom (MIT, PhD, CCE, ALW): From a strictly 'professional' point of view, I would have to say yes, but don't quote me on this. This is off the record, right?

Xxxxx Xxxxx(unnamed person at Atari): After several months working on the 1040EZ, I feel I have a true understanding of just what it is that this question means to all of you in respect to the announcement of this system that you are asking for my opinion about and for that I am giving you this answer.

Editor: I too have used this new 1040EZ and find it very easy to use. I also feel you should consider getting two of them, saving one for personal use only.

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**SWAP** – Switch back lets you load just about any two programs into your ST and switch instantly between them. It works with games, business programs, utilities, compilers, etc. Although only one program is running at a time, the other is available instantly, right where you left off.

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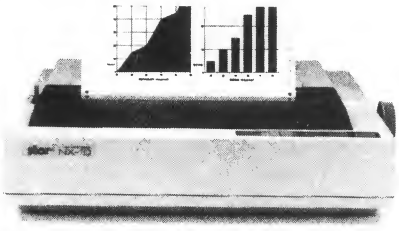

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